Amateur Radio

Volume 79
Number 11
November 2011
Price: $7 incl GST
www.wia.org.au

WIRELESS INSTITUTE OF AUSTRALIA

IARU R3 ARDF Championship a success

PROJECTS TO BUILD:

- Field Strength Meter
- Microwave beeper
- Audio compressor/AGC
- MF receiving loop

ISSN 0002-6859
11
9 770002 685116

YAESU

A TECHNOLOGY BREAKTHROUGH

THE NEW PRESTIGIOUS COMPACT RADIO WITH APRS

VX-8DR/E **VX-8GR/E**

Vertex Standard (Australia) Pty Ltd
10 Wesley Court, Burwood East, Victoria 3151, Tel: **1800 356 254**
http://www.vxstd.com.au

Amateur Radio

The Journal of the Wireless Institute of Australia

Volume 79
Number 11
November 2011
ISSN 0002-6859

Editorial

Editor
Peter Freeman VK3PF
editor@wia.org.au

Technical Editor
Peter Gibson VK3AZL

Publications committee
Don Jackson VK3DBB
Evan Jarman VK3ANI
Bill Roper VK3BR
Ewen Templeton VK3OW
Ernie Walls VK3FM
Greg Williams VK3VT

All circulation matters
nationaloffice@wia.org.au

How to submit material
Secretary
AR Publications Committee
PO Box 2042
BAYSWATER VIC 3153
or *armag@wia.org.au*

Letters to Editor
Editor AR Magazine
PO Box 273
Churchill Vic 3842
or *editor@wia.org.au*

Hamads
'Hamads'
PO Box 2042
BAYSWATER VIC 3153
hamads@wia.org.au

Advertising
All enquiries to
Advertising Manager
AR Publications Committee
PO Box 2042
BAYSWATER VIC 3153
or *admanager@wia.org.au*

Registered Office
Unit 20 11-13 Havelock Road
BAYSWATER VIC 3153
Australia
Phone: 03 9729 0400
Fax: 03 9729 7325

Production Deadlines
All articles, columns, hamads and advertising booking by **first day of previous month.**

The contents of Amateur Radio are Copyright Wireless Institute of Australia © 2011

General

Official opening of the Adelaide Hills Amateur Radio Society Inc (AHARS) training and operations 'shack' 14
John Elliott VK5EMI

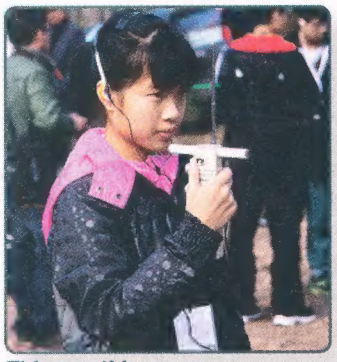
Adelaide Hills Amateur Radio Society overcomes some advanced technology 15
Rob Gurr VK5RG

ARDF championships a success - Report on the 8th IARU Region 3 ARDF Championships 22
Jack Bramham VK3WWW

D-STAR QSO Party in 2011 34

Bits and Bobs: How amateur radio enhances a marriage 37
Rananda Rich VK2FRAR

A history of the Amateur Operators Certificate and the Morse code requirement 44
Lloyd Butler VK5BR



This month's cover

The youngest girl in the Chinese team, Ye Qiaojian, listens intently to her 80 m receiver during the warm up period of the Model Event at the start of the IARU Region 3 ARDF Championships held near Maldon in late September. Ye Qiaojian is much loved by the rest of her team, who call her "little lovely". You can find an overview of the Championships commencing on page 22.

Technical

A switched mode power supply repair 6
Erich Heinzle VK5HSE

A sensitive field strength meter 8
Tony La Macchia VK2BTL

A simple beeper for microwave operation 10
Lou Blasco VK3ALB

An audio compressor/AGC circuit 20
Dale Hughes VK1DSH

Simple balanced line protector 25
Justin Giles-Clark VK7TW

The Porta-Loop: A loop antenna for MF reception 32
Peter Parker VK3YE

PSK31 QRP is great fun 46
Grant McDuling VK4JAZ

An unforgettable lesson 48
Alan Elliott VK3AL

Columns

ALARA 52
Contests 38, 40, 42
DX - News & Views 35
Editorial 2, 5
Hamads 54
Over to you 31, 47
Silent Key 13, 19, 31, 43
Spotlight On SWLing 17
VHF/UHF – An Expanding World 27
WIA Comment 3, 5
WIA News 4, 5
News from:
VK2 18
VK4 26
VK3 16, 19, 53
VK5 51
VK7 12

Contributions to Amateur Radio

Amateur Radio is a forum for WIA members' amateur radio experiments, experiences, opinions and news. Manuscripts with drawings and/or photos are welcome and will be considered for publication. Articles attached to email are especially welcome. The WIA cannot be responsible for loss or damage to any material. Information on house style is available from the Editor.

Back Issues
Back issues are available directly from the WIA National Office (until stocks are exhausted), at $8.00 each (including postage within Australia) to members.

Photostat copies
If back issues are unavailable, photocopies of articles are available to members at $2.50 each (plus an additional $2 for each additional issue in which the article appears).

Disclaimer
The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

Wireless Institute of Australia

The world's oldest
National Radio Society, founded 1910.

Representing
The Australian Amateur Radio Service
Member of the International Amateur Radio Union

Registered Office of the WIA
Unit 20, 11-13 Havelock Road
Bayswater, Victoria, 3153
Tel: (03) 9729 0400 Fax (03) 9729 7325
email: *nationaloffice@wia.org.au*
http://www.wia.org.au

All mail to
PO Box 2042 BAYSWATER VIC 3153
Business hours: 10am – 4pm weekdays

National Office staff

Manager	Mal Brooks	VK3FDSL
Administration Officer	Margaret Williams	
Examination Officer	Dianne Ashton	VK3FDIZ

Board of Directors

President	Michael Owen	VK3KI
Vice-President	Phil Wait	VK2ASD
Directors	Philip Adams	VK3JNI
	Bob Bristow	VK6POP
	Ewan McLeod	VK4ERM
	Chris Platt	VK5CP
	Trent Sampson	VK4TI
Secretary	Sarah Thompson	VK3AUD
Treasurer	John Longayroux	VK3PZ

Coordinators

AMSAT	Paul Paradigm	VK2TXT
ARDF	Jack Bramham	VK3WWW
Australian ARISS	Tony Hutchison	VK5ZAI
Awards	Chris Platt	VK5CP
Clubs	Ted Thrift	VK2ARA
Contests	Craig Edwards	VK8PDX
John Moyle Field Day	Denis Johnstone	VK4AE
Editor 'AR'	Peter Freeman	VK3PF
EMC/EMR	Gilbert Hughes	VK1GH
	Keith Malcolm	VK1ZKM
Standards	Gilbert Hughes	VK1GH
	David Wardlaw	VK3ADW
	John Bishop	VK2ZOI
NTAC	John Martin	VK3KM
Historian	Peter Wolfenden	VK3RV
IARU Region 3 Liaison	Chris Platt	VK5CP
Monitoring Service	Peter Young	VK3MV
International Travel Host	John Miller	VK3DJM
ITU Conference & Study Group		
	David Wardlaw	VK3ADW
	Keith Malcolm	VK1ZKM
	Brett Dawson	VK2CBD
	Dale Hughes	VK1DSH
QSL Curator	National Office	
Repeater	Peter Mill	VK3ZPP
Webpage	Robert Broomhead	VK3DN
Emergency Communications Group		
Coordinator	Phil Wait	VK2ASD
Members	Ewan McLeod	VK4ERM
	Peter Young	VK3MV

Editorial

Peter Freeman VK3PF

Publications Committee activities

The Publications Committee is made up of a team of volunteers, all committing part of their hobby time to work towards the preparation of this publication – *Amateur Radio*. I doubt that I could do my job as Editor without the contributions of the formal and informal members of the committee. We have several formal members of the Publications Committee, all of whom are listed in the left hand column on page one of each issue. We also have a couple of other informal members who contribute by being part of the proof reading team for each issue of this magazine. In addition to these members, we value the input from a number of others involved in the WIA, and of course we cannot ignore the efforts of Fontana Design in the preparation of each issue.

Whilst *Amateur Radio* is the regular monthly evidence of our combined efforts, and logically the task which consumes most of our time and effort, we also have other tasks to consider.

As I prepare these notes, the *2012 Callbook* is at the printer. The *Callbook* is edited by Greg VK3VT, with many contributing to ensure that the most up to date information possible is included. As I mentioned in last month's Editorial, there must always be a cut-off date for all information. Therefore, a printed volume such as the *Callbook* will always be out of date before it can be distributed! But we do as best we can. I thank Greg for his efforts and also all who responded to Greg's requests for updated information. As a team, we also thank Communique Graphics for their efforts in collating and layout of the *Callbook*.

By now, the *Callbook* should be available for purchase. Details can be found elsewhere in this issue, or at the Bookshop on the WIA website. Clubs are reminded that they can order in bulk at a discounted price. I am sure that the *Callbook* will also be available for purchase at upcoming major hamfest events.

The Publications Committee also considers other projects from time to time. We may have something new to announce in the New Year..... watch this space.

Summer is coming

As many readers will be aware, my primary area of interest in amateur radio is the VHF, UHF and microwave regions, especially in the weak signal segments of the bands.

I hope to have a mast or two approved and erected before the forthcoming summer season arrives, with appropriate antennas mounted. If I achieve that goal, I will be able to engage more effectively in the activities that provide me with both stimulation and satisfaction.

In addition to getting a mast and antennas organised, I also need to check out the microwave transverters and associated equipment in readiness for summer, when we can hopefully experience periods of enhanced propagation.

But even if you are not well set up at home, you can still be involved in such activities if you have transceivers which will operate in the narrowband segments of the higher bands. Consider getting out onto a local high spot with horizontally polarised antennas, especially during the VHF/UHF Field Day events or during the Ross Hull Contest. You might be surprised at what you can work!

Hopefully we will continue to see further improvements in HF propagation as we move out of the cycle minimum.

A pirate?

In the past couple of weeks I have received reports that my callsign has been appearing on the 40 m band,

Continued on page 5

WIA comment

Michael Owen VK3KI

The 8th IARU Region 3 ARDF Championships

Let me start by quoting a rule:

C2.4 FIVE hidden transmitters shall operate on each band (i.e. 3.5 and 144 MHz) in the following sequence:

- *In the first minute: transmitter no. 1 radiating the characters MOE.*
- *In the second minute: transmitter no. 2, radiating the characters MOI.*
- *In the third minute: transmitter no. 3, radiating the characters MOS.*
- *In the fourth minute: transmitter no. 4, radiating the characters MOH.*
- *In the fifth minute: transmitter no. 5, radiating the characters MO5.*

This sequence shall repeat after the fifth minute with transmitter no. 1 operating in the sixth minute, etc.

A sixth transmitter, acting as a beacon, shall be placed at the entrance to the "finishing corridor" (see D2.10). This transmitter shall transmit the characters MO continuously.

That is one Rule taken from the twelve pages of the *"Rules for IARU Region 3 Championships in Amateur Radio Direction Finding".*

One of the features of amateur radio is that it covers such a wide range of diverse interests. Radio sport is one of those interests.

I wrote about the IARU in the September 2011 issue of *Amateur Radio.* The IARU Region 3 ARDF Championships is one of the few activities of IARU Region 3 that is not confined to its policy/advocacy roles but engages in ordinary amateur activities.

Yet how many of us in this country really know very much about ARDF as it is conducted as an international sport?

As I say, there are 12 pages of detailed rules, and changes to those rules, even their interpretation, is a very hot topic for those involved, across the world and particularly in Region 1.

As you can see from this issue of *Amateur Radio,* the 8th IARU Region 3 ARDF Championships were conducted around Maldon, Victoria, from 23 September to 28 September 2011. The article by the WIA ARDF Coordinator, Jack Bramham VK3WWW tells a little about the event, as do the photographs.

Perhaps the scope of the event is best summed up by Jack, where he has written:

Participants for this event were made up of Australia (WIA) 19, China (CRSA) 34, Japan (JARL) 31, Kazakhstan (KFRR) 1, Korea (KARL) 6, Malaysia (MARTS) 2 and USA (ARRL) 3, totalling 96 competitors. Added to the competitors list there were team officials, trainers and International Referees. So, as you can see it is really a major event for us here in VK.

The WIA was the host Society and provided administrative support.

The planning and organising, the real work, was undertaken by a group from the Victorian ARDF Group, led by Jack.

Jack also refers to the many volunteers needed to conduct the actual event.

The preparations started 18 months ago, and I realise now the extent of those preparations necessary to conduct such an event properly. These preparations extended to contacting landowners, government agencies as well as local authorities, quite apart from the obvious things of finding a venue, determining a course, finding suitable and not too expensive accommodation, organising registrations processes and organising transport for quite a number of people and arranging a day for the overseas visitors to see something of that part of our country.

Finding a course is governed by the detailed rules which define the terrain for the competition as follows:

C2.1 The area and terrain over which the competition takes place shall be predominantly wooded. Differences in level over the terrain shall not exceed 200 meters. The Organising Society shall exercise prudence in the choice of terrain taking into account any hazards that might be harmful to the health of competitors. An area used in the past 12 months for any ARDF event should not be used.

The choice of location, Maldon, with the right terrain and very much a centre in the attractive and historically interesting Gold Fields part of Victoria, would be hard to better.

Amateur radio has many aspects. Each of us tends to see it in the prism of our own particular area of interest. ARDF, particularly international ARDF is an aspect that many of us in Australia really know very little about.

As someone who has discovered that ARDF can be a bit more than the 80 metre transmitter hunts that I once enjoyed, I learnt a number of things from the IARU Region 3 ARDF Championships.

One was to understand the mixture of technical and physical skills required, the real orienteering skills needed.

Another was the genuine international friendships that were fostered, and importantly, how this activity attracted younger people.

Continued on page 5

WIA news

ACMA investigates serious interference on amateur bands

Mark Loney, Executive Manager, Operations Branch of the ACMA has advised the WIA that the Operations Branch has been investigating interference to the Mt. Cottrel and Mt. Macedon repeaters as a result of complaints made by radio amateurs.

As a result of those investigations the ACMA applied to the Melbourne Magistrates Court for the issue of a search warrant under the *Radiocommunications Act 1992.* The application was successful and the search warrant was executed on premises in metropolitan Melbourne on Wednesday 14 September with the assistance of Victoria Police.

Mr Loney advised that as this is an ongoing investigation, the ACMA is unable to provide further details.

The WIA President, Michael Owen VK3KI said that the WIA welcomes these compliance activities affecting the amateur community.

Mr Loney points out that the successful prosecution of individuals charged with causing serious interference on amateur bands depends heavily on the willingness of amateurs to give evidence and to provide evidentiary statements to ACMA compliance staff.

The WIA encourages all amateurs to support the ACMA investigations.

Queensland Clubs meet in Bundaberg

Representatives of nine Queensland WIA affiliated clubs met with WIA President Michael Owen VK3KI and WIA Director Ewan McLeod VK4ERM on Sunday 9 October 2011 at the SES Headquarters at Bundaberg. Michael Charteris VK4QS, Chair of the WIA Queensland Advisory Committee, also participated. The meeting followed the 50th Anniversary celebrations of the Bundaberg Amateur Radio Club the day before.

The WIA President briefed the representatives of the nine clubs attending on the current matters the WIA was addressing, and identified a number of issues for discussion.

How to attract younger new amateurs became a theme of the discussion, with useful ideas being exchanged. The representatives of the clubs shared their experiences and collectively JOTA was seen as an opportunity to present amateur radio to potential young new amateurs.

It was agreed that what may have been attractive and interesting in the past may no longer be the best approach and it was agreed that clubs could be helped by a guide, setting out possible approaches to promoting amateur radio to groups of younger people.

The Bundaberg Club undertook to investigate producing a first draft of such a guide.

Other matters discussed included the balance of content in the WIA magazine, the charging requirements imposed on the WIA for the examination services it provided, WIA emergency communication accreditation and the effectiveness of the WIA office.

Michael Owen said that it was a most useful and very constructive discussion.

New callsign block available

The ACMA has advised the WIA that a number of amateurs had sought Advanced three letter callsigns commencing with the letter "O". Previously that block had not been used because of a fear of confusion between the letter "O" and the numeral "0". The opinion of the WIA was sought.

The Directors took the view that as phonetics are almost universally used and as other countries used such a block without apparent difficulty, there seemed to be no reason why that block could not be used.

The ACMA has now released the block of three letter callsigns commencing with the letter "O" for Advanced licensees and the available callsigns are listed on the Public List of Available Callsigns on the WIA website.

Successful 8th IARU Region 3 ARDF Championships concludes

The 8th IARU Region 3 ARDF Championships concluded on Tuesday evening, 27 September, with a banquet and award ceremony in the Baringhup Community Hall.

Baringhup is about 10 kilometres from Maldon, where the Championships had been centred and the Community Hall has been described as an honest, down-to-earth tin shed, which started life as an Australian air force building.

Teams from Australia, USA, China, Japan, Malaysia and Korea had competed in the Championships, with one competitor from Kazakhstan.

Many medals were presented at the banquet by Michael Owen VK3KI IARU Region 3 Chairman and very many photographs of the presentations were taken.

IARU Region 3 ARDF Committee Chairman, Yoshio Arisaka JA1HQG said that the 8th ARDF Championships had been a wonderful success and congratulated everyone involved in conducting them.

The event was hosted by the Wireless Institute of Australia and the organisation was undertaken by a committee from the Victorian ARDF Group, under the leadership of Jack Bramham VK3WWW, WIA ARDF Coordinator, whose great contribution was particularly recognised.

Ken Fuller VK4KF retires as VK4 Advisory Committee Member

Ken Fuller VK4KF has requested to retire from his position on the Queensland Advisory Committee.

The WIA Board has appointed Alan Shannon VK4SN for the balance of Ken's term.

WIA news

Continued from page 4

Once again, amateur radio is indebted to Ken for his commitment to the Institute and its activities.

Antenna height regulations - NSW Planning Review

In New South Wales amateur radio towers and antenna heights are regulated through local environment plans (LEPs). The NSW Department of Planning is looking to change the way LEPs are made and to make them more flexible. To this end a planning review team is holding a series of public meetings around NSW and is accepting written submissions.

WIA Vice President Phil Wait VK2ASD says that there may be an opportunity to improve the situation for radio amateurs in NSW - the most populous state for hams - if as many NSW radio amateurs as possible make written submissions to the review. He says that the WIA believes that a written submission would be more effective that attending the public meetings - but time is short.

The WIA urged as many amateurs as possible to make written submissions and WIA Manager Mal Brooks has contacted the WIA NSW Advisory Committee and asked them to draw the attention of clubs and individuals in New South Wales to this matter as soon as possible.

Background information and directions on how to make an effective written submission have been placed on the WIA website at *www.wia.org.au*

WIA comment

Continued from page 3

The Chinese team included a group of students who carried their school flag at the closing dinner.

I was privileged to be at both the opening and closing of this great event.

For me it was great to see so many young people, great to catch up with old friends such as the Chair of the Region 3 ARDF Committee Yoshio Arisaka JA1HQG, and above all, to see the friendly camaraderie of so many people from different lands brought together by this aspect of amateur radio.

I commend Jack, his team and the many people from both amateur radio and orienteering who made the event the success it undoubtedly was.

To all involved, from organisers to helpers to competitors, I extend my sincere congratulations on a truly memorable and friendly occasion.

I am proud, too, that we, the Wireless Institute of Australia, were able to contribute to the success of this international event.

Editorial

Continued from page 2

with the "operator" being someone other than me.

Whilst I do not appear often on the HF bands, I do pop up occasionally. So I may well be on the HF bands. But the "pirate" reported to me is not using my name.

Anyone hearing the callsign VK3PF on air being operated by someone with a name other than Peter located at Churchill (or some portable location) is asked to log as much detail as possible about the station and operator, including location, time, date and frequency. Please then forward the information to me so that it can be collated and forwarded to the ACMA for further investigation.

November celebrations

You may wish to note that Amateur Radio Victoria (ARV) will be celebrating its Centenary during November this year. They are offering a Centenary Award certificate and also promoting the Keith Roget Memorial National Parks Award during the celebrations. Further details can be found in the ARV notes and on their website.

That is all for now.

Cheers,

Peter VK3PF

*Try **VHF/UHF** Contesting*

Spring Field Day November 26/27

Ross Hull Memorial VHF Contest January 2012

Do you have a transceiver with any of the VHF or UHF bands in addition to HF? Then have some fun during the upcoming VHF/UHF events. Listen around in the band segments xxx.150 - xxx.250 MHz (where xxx = 50, 144, 432 or 1296) on USB. You may be pleasantly surprised at what you can work! Support the contest by submitting an entry.

A switched mode power supply repair

Erich Heinzle VK5HSE

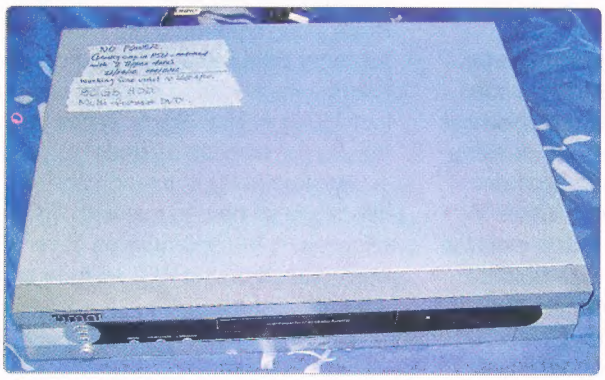


Photo 1: The DVD HDD recorder, complete with a helpful label to indicate the nature of the fault.

Switched mode power supplies work by rectifying alternating mains current and then driving a high frequency transformer with pulses of this rectified current. The high frequency transformer produces a high frequency output which is then rectified and smoothed by filter capacitors.

The advantages of this approach are that a small, lightweight transformer can be used instead of a big iron cored mains frequency transformer, and very little standby current is required when no load is being drawn. Two of the major downsides are that the high frequency pulses of current are rich in harmonics which can produce broadband RF noise, and that the ripple in the DC output of the high frequency transformer can cause heating in the smoothing capacitors used to condition the DC output before it makes its way to the electronics being powered.

Switched mode power supplies are often very compactly constructed, and sometimes lack airflow, causing more heating of the components. Failure of the smoothing capacitors is a common mode of failure in the switched mode power supplies which are becoming almost ubiquitous in consumer electronics, computers and radios.

This short tutorial documents the process of identifying and replacing smoothing capacitors which have failed in service in a switched mode power supply. This is by no means a comprehensive guide to repairing power supplies, but it will give you enough information to resurrect a lot of the failed switched mode power supplies you come across.

Photo 2: The power supply is clearly visible once the lid is removed.

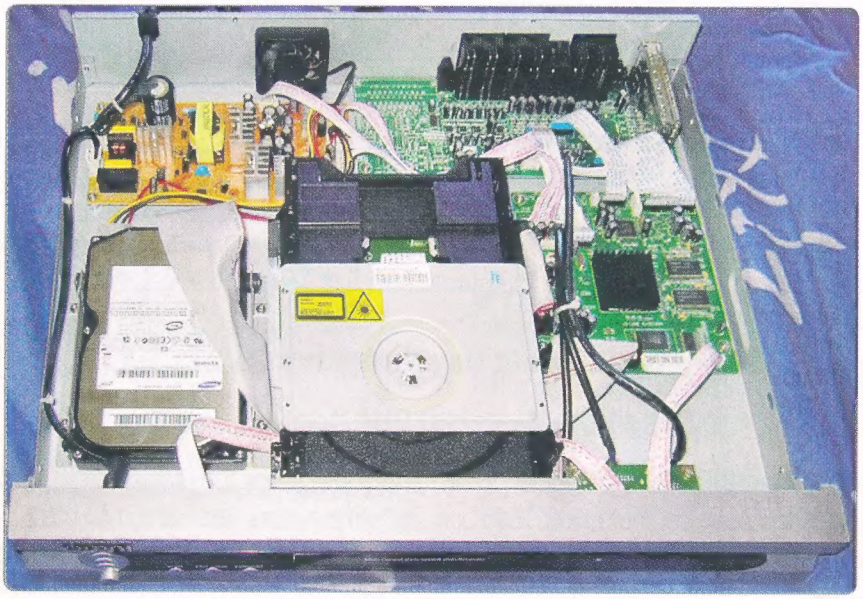


Photo 1 shows the device being repaired, a DVD HDD recorder which was looking very lonely one night at an Adelaide Hills Amateur Radio Society meeting. Usually, you will not be lucky enough to have a label indicating the fault on the device which has suddenly failed. Usually, it will simply show no signs of life when turned on. After opening the lid, the power supply board is quite obvious in the upper left hand portion. It has the mains lead going to it; quite a few heatsinks for the voltage regulators, some ferrite cored transformers, various diodes, and lots of electrolytic capacitors. The rest of the boards are full of smaller surface mount devices, crystals and smaller wires that look more reminiscent of computer motherboards. See Photo 2.

Switched mode power supplies can harbour lethal DC voltages in excess of 300 volts. Do not poke around a recently powered up power supply unless you know how to safely discharge the electrolytics, and even then, it is safer and easier to leave it a day and come back to it. And whatever you do, do not work on the device with the power lead plugged in, as this is just asking to be electrocuted.

Note that this manufacturer has not skimped on a power switch on the front panel. Some manufacturers do not have this and the switched mode power supply runs all the time, thereby increasing the heat stress on components. This was seen in a poorly ventilated TEAC digital set top box which had died with failed smoothing capacitors. It drew seven watts even when 'asleep'!

After removal of the board from the chassis, it can be inspected visually for obvious problems.

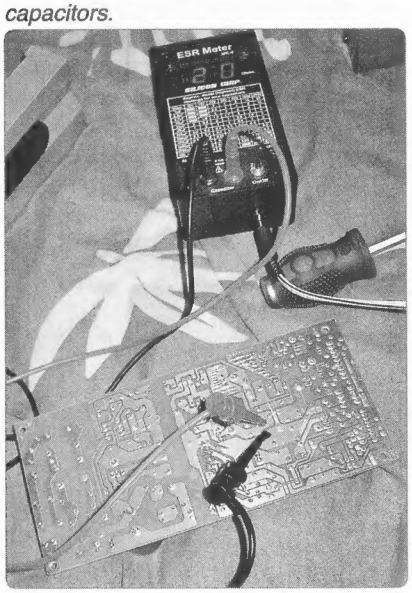
The fuse in the black rectangle on the lower left of the power supply board was intact. On detailed inspection, a 2200 µF 10 V low ESR capacitor has an obvious bulge.

Photo 3: The rear electrolytic capacitor is obviously bulging.

Other things to look for include brown spots on circuit boards where components have overheated. This can be seen under the red zener diode with the white stripe in the left of the above photo, right next to a 220 µF 16 V electrolytic. Having gone to the effort of dismantling the unit, it pays to make sure nothing else warrants replacement. A particularly helpful test instrument for checking normal looking electrolytics is an ESR meter, where ESR stands for equivalent series resistance. This ESR meter was built from a kit.

A capacitor, at is simplest, is a pair of plates separated by a dielectric. If the composition of the plates or their surfaces changes, it can increase the resistance to current passing through the capacitor, which in turn can lead to increased heat dissipation in the capacitor, which increases resistance even further, and so it goes, slowly cooking the electrolyte in the capacitor. The ripple currents in switched mode power supplies can be significant, so for this reason, low ESR capacitors are used. Unfortunately, even the low ESR capacitors rated to 105 degrees in this unit can fail in service when near heatsinks that are giving off heat, and in poorly ventilated enclosures. Of use to us is the fact that failing or failed electrolytic capacitors will increase in resistance, and by checking the ESR of the capacitors, we can sometimes identify normal looking but faulty electrolytic capacitors.

Photo 4: Checking the ESR of the capacitors.



On testing, the bulging 2200 µF 10V electrolytic is found to have an ESR of two ohms. This is much more than the 0.1 or less ohms we would expect of a new electrolytic of the same value and voltage rating. Checking the other capacitors, three 220 µF 16 V electrolytics were also found to have higher than expected ESRs, and were also marked for replacement. One of these was next to the brown spot under the zener diode shown above.

In the absence of an obviously defective electrolytic, and in the absence of an ESR meter, one can start troubleshooting of switched mode power supplies by replacing all the electrolytics near heat sources, and also checking diodes and resistors with a multimeter, but this is a bit of a shotgun approach. Sometimes failed semiconductors will show very obvious signs of failure.

The suspect capacitors were de-soldered with a soldering iron and de-soldering braid. I have read that copper braid from coaxial cable can be used as a de-soldering braid substitute, but I have not tried it.

The new capacitors are then installed, the board put back in the chassis, and the unit fired up. Ideally, this should be done with the lid back in place to reduce the risk of electrocution.

Success!!

Of interest, the fan was groaning a bit on powering up the unit, which may explain how the power supply died in the first place. A lack of air flow might have caused the overheating and capacitor failure. The fan will be replaced. Of course, if all of the above fails to work, one must go back to the beginning and look for other obvious or not so obvious component failures, or perhaps cold solder joints. If it all becomes too hard or potentially too expensive, salvage the good bits and throw out the rest. Good luck with your dead electronics!

Photo 5: Success!

A sensitive field strength meter

Tony La Macchia VK2BTL

One of my projects has been experimenting with a portable dipole antenna using two Moonraker (UK) SPX200 multiband mobile whips. This antenna project has shown some promise with receiving and transmitter loading. However to further evaluate the dipole's performance I needed a sensitive broad band field strength meter to carry out near and far field strength measurements, so I chose to construct one.

The circuit

The circuit is basically an extension of the simple diode detector type Field Strength Meter, where its output is fed into the input of an inverting operational amplifier, and as configured offers very high gain characteristics. Past experience with using op-amps in audio and video applications has offered the best solution for this project over the use of discrete solid state components.

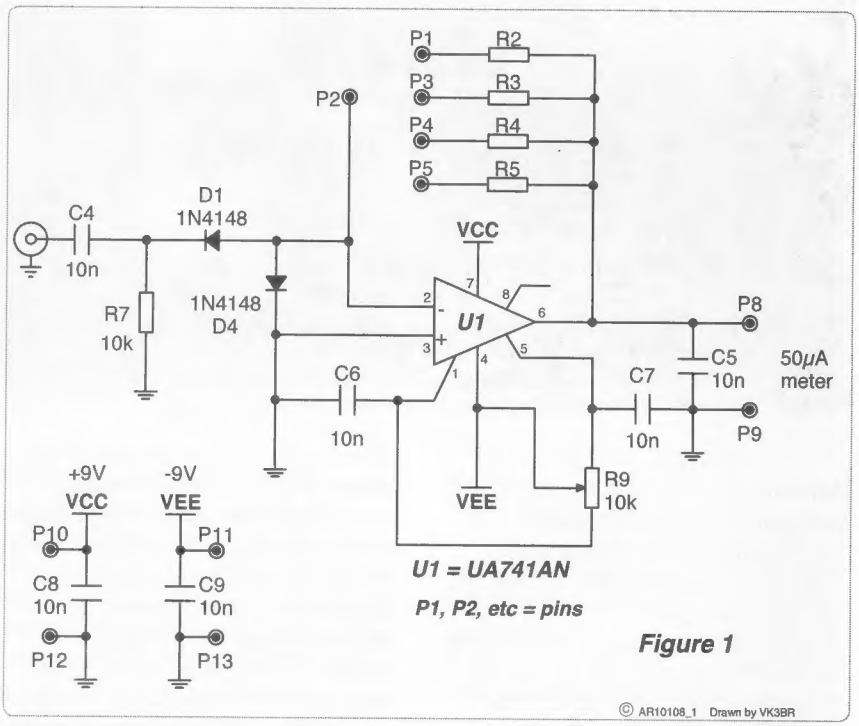


Figure 1: The circuit of the field strength meter.

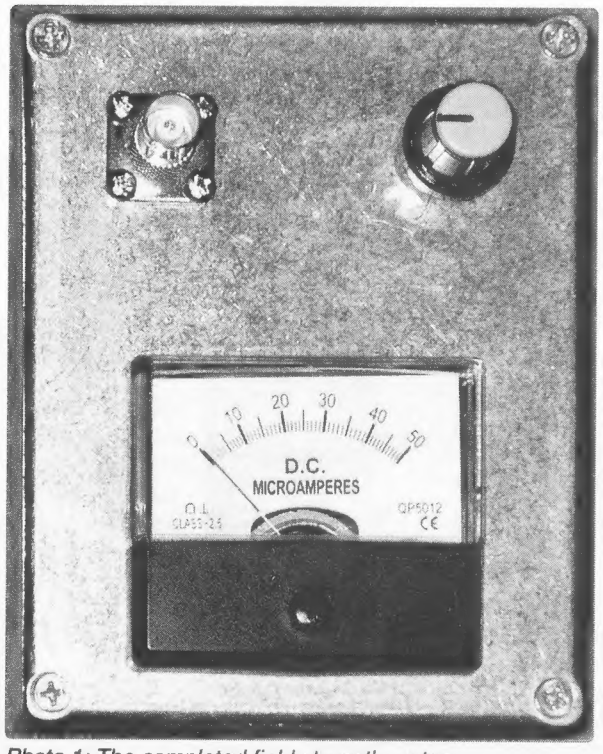


Photo 1: The completed field strength meter, minus the antenna.

The antenna is fed to the diodes via a capacitor; there are no tuned circuits at the input, so the instrument has broadband characteristics from 80 m to 70 cm. Note: Comments at 'The antenna' paragraph.

All capacitors are 50 V ceramics. Resistors are 0.25 watt. Diodes are IN4148 and the IC is a UA741 general purpose op-amp. Note the circuit is annotated for a one off developed PC board. It is left up to the individual constructor to develop a suitable PC board or use a prototype board as described.

Sensitivity

The amount of sensitivity can be set as required by the selection of sensitivity resistors R2, 3, 4 and 5, either by switching or linking. Switching is achieved between P2 and P1, P3, P4 and P5. The value of resistor for maximum sensitivity is in the range from 680 kOhms to 820 kOhms . It is suggested sensitivity steps be best set at X10, for example, 820 k, 82 k, 8.2 k etc. Should the constructor choose to use a sensitivity switch, I recommend that they use shielded cabling from the circuit board to the switch to avoid instability.

As my requirements are for near and far field measurements, I have opted to set the FSM for the most sensitive setting, the resistor value is set at 820 kOhms. Experiments with the adjustable telescopic antenna will compensate for other sensitivity settings.

Photo 2: A selection of potential antennas for use with the field strength meter.

Supply

The IC requires + 9 volts and – 9 volts so two 9 volt batteries are connected in series with the +/- junction grounded.

The antenna

The FSM test antenna is constructed from a telescoping section of a rabbit ear TV antenna which expands to approximately one metre, assembled into a large coax cable entry PL259 plug. A neat and tight fit between the antenna and the inner rim of the plug is achieved by using a piece of the outer sheath of the coax cable. This is an effective compromise broadband antenna. However I found that when I used resonant antennas the sensitivity of the FSM was further enhanced, particularly when measuring at far field points. For two metres I am using a Sagent 5/8 HH vertical with a BNC plug and for HF I use a Moonraker SPX100 multiband vertical with frequency selection taps – an ideal set-up over using switched tuned coils at the antenna input.

Vertical and horizontal polarisation of the FSM antenna is achieved by using T piece or elbow coax adaptors.

Construction

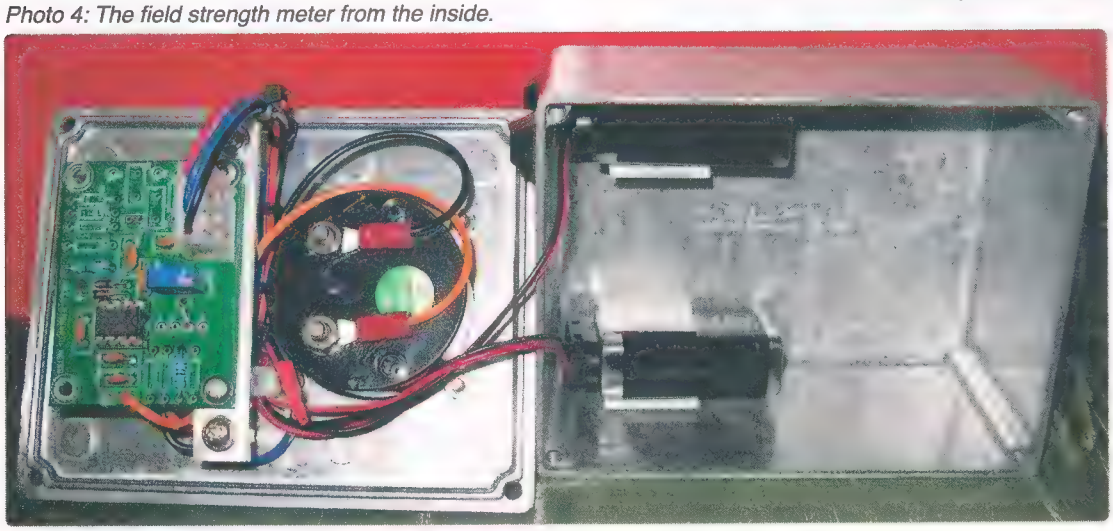
Initially I used a prototype PC board with IC mounting facilities, as this allowed for point to point wiring, that is, as a pseudo PC board. Importantly, keep all leads as short as possible. It is advised to use either a 50 μA or 100 μA meter with this instrument.

Calibration

This FSM is basically a relative measuring instrument and as such is ideal for measuring antenna radiation and field patterns. Accurate calibration would require access to RF chamber facilities. There are equations to determine field strength levels with known antenna gains and measured distances from the antenna and at the measuring point.

Photo 3: The completed field strength meter, antenna attached, ready for use.

Photo 4: The field strength meter from the inside.



Costs

I have used all new components including an aluminium diecast box. My costs were just under $50. You may have some items amongst your junk box which can be used to reduce the cost.

A simple beeper for microwave operation

Lou Blasco VK3ALB

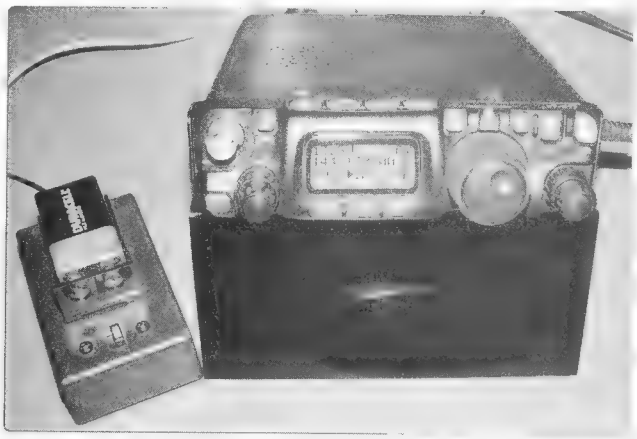


Photo 1: FT-817 with external beeper.

Introduction

Working on the microwave bands (1296 MHz and up) when the signal to noise ratio is low, the amateur operator's ability to find the right frequency and right direction are crucial. The aim of this article is to present a couple of simple methods for generating a distinctive signal on the air that is easy to hear even under difficult conditions.

Microwave contacts are normally arranged on a lower band, say 2 metres, agreeing on the operating frequency and compass headings then moving to the agreed frequency. Without being 100% sure that both stations are on the same frequency the chances of finding each other and aligning antenna systems to each other are very slim indeed. If you cannot hear a station there is no way you can adjust your dish for a proper heading. It is not unusual for a microwave signal to be up to 10 or even 15 kHz off the nominated frequency. You might wonder why signals can be that far off frequency. Take the example of a 10 GHz transverter system. It has a 144 MHz intermediate frequency (IF) and uses a 106.5 MHz reference crystal that is multiplied 96 times to 10224 MHz. Even though the crystal is stabilized by a heater it can and does drift in frequency. Consider two identical systems whose crystal oscillators differ by 100 Hz. Not a lot at 100 MHz but almost 10 kHz at the operating frequency. Remember that this does not take into account the frequency differences between the two IF radios which might not be exactly on the frequency indicated on the display.

Most microwave operators use a beeper or, as it is sometimes called, a 'keyer' to help each other tune in on their transmissions. The beeper connects to the key socket of the radio and sends a series of dits or dahs in CW. It is not a keyer in the traditional sense but it effectively works in the same way. A beeper creates a distinctive 'beacon signal' that is easily recognizable even if the signal strength is low and is very unlikely to be confused with any other signals that may be heard. Once you have heard a beeper in operation there is no question that it is the signal you are looking for and you will wonder how you ever got along without one.

You might wonder why a beeper is used rather than just calling CQ. Establishing a microwave contact takes time and it is not unusual for operators to remain in contact on a liaison frequency while searching for each other's signal. Calling CQ is an inconvenience at best. The process of tuning for a signal and peaking

Figure 1: The 555 beeper.

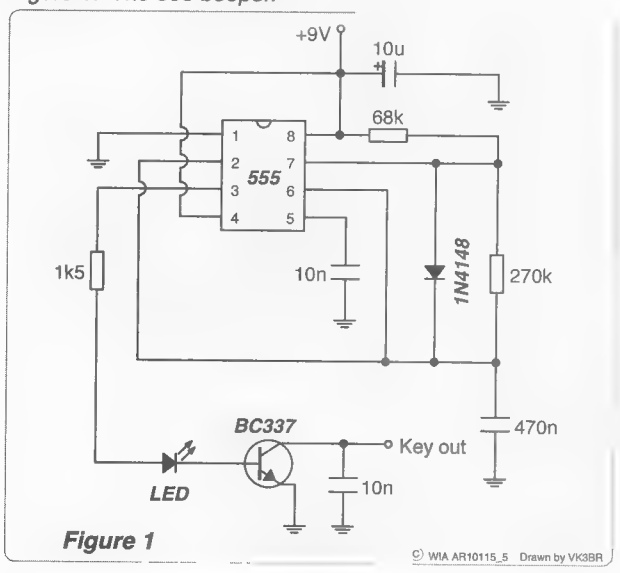


Figure 1

Figure 2: The 4011 beeper.

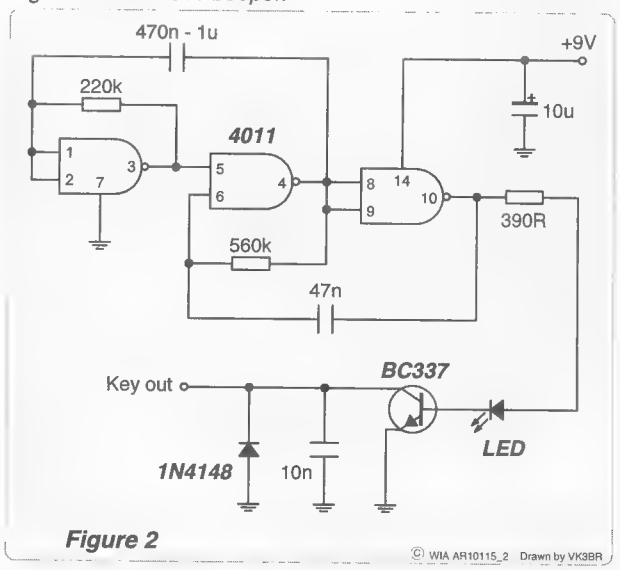


Figure 2

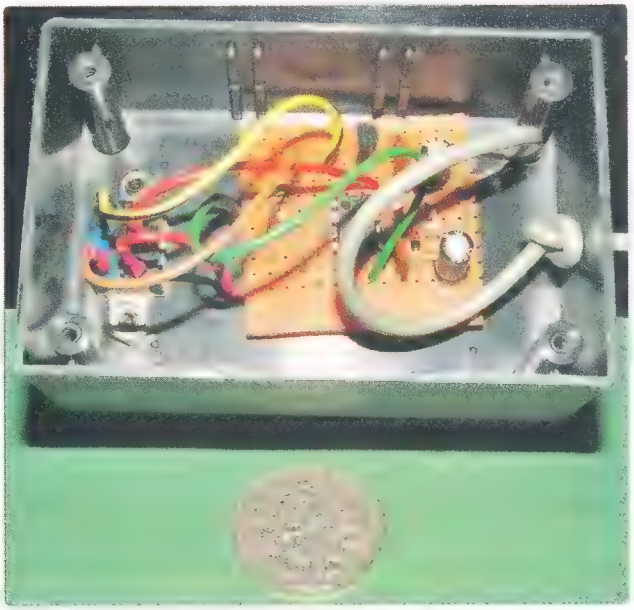


Photo 2: Inside view of 555 beeper circuit.

dishes for a DX microwave contact is reasonably involved and looking for a CQ call that may be down in the noise can be difficult. Some microwave operators still venture into the field without a beeper and rely on various other methods to put some kind of beacon signal on the air, such as calling CQ, whistling or transmitting a carrier. Finding these transmissions can prove difficult. They all work to some extent but come a poor second to a beeper signal. The beeper increases the chances of being found and making a successful contact.

Radios with in-built CW keyers

There are plenty of radios that are suitable for use with microwave systems. They are usually small portable all mode transceivers that operate on 2 m or 70 cm. The FT-817 is a very popular choice being battery powered, small, multi-band and reasonably affordable. The FT-817 has the added bonus of an internal CW keyer which is easily accessible. Whilst the following description relates to the FT-817, other modern radios probably behave in a similar fashion. Consult your radio manual for further details.

How to configure the FT-817 keyer for beeper operation

Select menu #17 and make sure the delay is set to 250 ms.
Select menu #21 and adjust the CW speed (45 to 60 wpm).
Select menu #22 and adjust the CW weight to 1:4.
Press and hold button F to save settings.
Set the function keys to level 10 (VOX/BK/KYR).
Press function key B to enable semi break in mode.

Insert an open 3.5 mm mono plug into the key socket at the back of the radio. The sleeve on a mono plug is so long that it will short the rings (dah) connection when plugged in to the key socket.

Select CW mode on the radio and press function button C to enable the keyer. Your radio will now send a constant stream of dahs at the selected speed. Press function button C again to disable the keyer.

This is the simplest method to use for the FT-817. You could also try shorting the mono plug which will send alternate dits and dahs or use a 3.5 mm stereo plug with a switch to select dits, dahs or off.

Note: If you want to use an external beeper you still need to enable semi break in mode.

Simple beepers for older radios

An outboard beeper can be used with older radios that do not include a keyer. I use a beeper based on a 555 circuit and have built a number of them for field day use. The circuits are so simple that no PCB is required. I built them on Vero board or perforated board and installed them into a small project case. They have a power switch with integrated LED indicator and a short lead with a 3.5 mm plug that goes to the key socket on the radio. They are powered by a 9 volt battery which is attached to the outside of the case making replacement easy. Consider that these beepers are so small that you could build them into the IF radio and draw so little current that they can remain continuously energized whilst the radio is on. The IC-202 in particular has plenty of space in the battery compartment to mount a beeper. It is possible that other radios might also have enough room inside to add a beeper.

Conclusion

It is acknowledged that a number of operators run GPS locked systems and have very high frequency stability and accuracy which makes finding their signals much easier. However there are still plenty of operators out there where this is not the case. I hope this article encourages those operators that do not take a beeper into the field to consider this simple yet invaluable tool that will enhance their microwave activities.

Thanks to Chas VK3PY and David VK3QM for their advice and assistance during the preparation of this article.

Photo 3: Outboard beeper with external battery.

VK7news

Justin Giles-Clark VK7TW
Email: vk7tw@wia.org.au

The Prostate!

We had a timely reminder for men over 40 about getting your prostate checked from radio amateur Brett Marley VK7FMMM, who is well known to his Heart 107.3FM listening audience each morning.

Brett was diagnosed with prostate cancer and has undergone an operation to remove his prostate and we wish Brett a speedy recovery. Unfortunately, close to 3,300 men die of prostate cancer and about 20,000 new cases are diagnosed each year in Australia and this is not good considering prostate cancer can be cured if detected and treated. So, if you are experiencing some discomfort with 'the plumbing' then ask your GP about your prostate, it may just save your life!

Photo 1: Brett 'Marls' Marley is a well-known radio personality in Hobart. Image courtesy of Heart 107.3 website.

Repeater and IRLP news

Joe VK7JG has let us know that Air Services Australia have replaced the cable tray and Heliax on the Mt Barrow tower and mounted the new broadcast link corner reflector. NTARC would like to express its appreciation to Andrew Snadden and Tasmanian Electronics and Communications Services Pty Ltd for the very kind and generous donation of that angle reflector. An interesting by-product is that the crackle that used to affect repeater VK7RAA has disappeared and may have been caused by the deteriorating cable tray fasteners. Please note the falling cable tray also dismembered the digipeater antenna and therefore APRS coverage is a little patchy at the moment in the north of VK7. IRLP Node 6700 (VK7TAZ) on VK7RAA is also currently off-air due to a computer system failure. Hayden VK7HA lets us know that pager filters have successfully been installed on VK7RCH on Grey Mountain above the Huon Valley and this has solved the interference issues. VK7RCH links into VK7RAA.

Northern Tasmania Amateur Radio Club

On 14 September Bill VK7MX presented a fascinating presentation on the very popular open source platform the Arduino and thinks it is certainly one of the most useful digital building blocks for the radio amateur. Thanks Bill. The continuation of this presentation with the practical demonstrations will be at the November 9, 2011 meeting at Alanvale Skills Institute, Block B from 7.30 pm. The Northern WICEN coordinator Norm VK7KTN is looking for communications helpers at the State Equine Endurance Championship at St Helens at the end of November, 2011. This event is a precursor to St Helen's hosting the National - Tom Quilty equine event. Please contact Norm if you are interested. The October NTARC meeting was the annual pilgrimage to the Mt Barrow interpretation centre which is always a great show.

North West Tasmanian ATV Group (NWTATVG)

Tony VK7AX has been broadcasting via ATV in the NW and via the *http://batc.tv/* internet streaming site (VK7AX members) some ATV archive material from the last 30-40 years following its conversion to digital format. Tony started with some videos from NW and Northern branch activities, Gladesville ATV club via Aussat (1991) and some Gladesville WICEN material, and much more will be broadcast in future. Keep an eye on the VK7 Regional News mailing list for notification of future material at *http://groups.yahoo.com/group/vk7regionalnews/*

Radio and Electronics Association of Southern Tasmania

We congratulate Paul Tudor-Stack VK7MKY who successfully gained his Standard licence recently. Paul is a yachtsman from Darwin and is having

Photo 2: L to R: Ian VK7QF and Graham VK7ZGK hosting a DATV Experimenter's Night 'in the studio'.

a break in Hobart before crossing the Tasman to ZL. The callsign is apt given Paul's boat name is Monkey-Fist!

September 4th was the REAST car boot sale with many about enjoying the weather, sausage sizzle, preloved items and, thanks to Damian VK7SD, a look at one of the OB vans courtesy of the ABC complete with large hydraulic mast. The past few months have seen some wonderful donations to the club – the first thank you is to Gerry VK7GK, who has donated a large tower and rotator for the club station, thanks Gerry. The second big thank you is to Graham VK7ZGK who donated a large LCD TV to the club which will come in very handy for DATV nights and training sessions, thanks Graham.

Our DATV nights have been well attended with both physical and now virtual attendees via the *http://batc.tv/* streaming site (member's stream – VK7OTC). Over the last month we have had some wonderful show and tell with: line following robots, a 3D MakerBot Printer – thanks to Patrick VK7FPJB who demonstrated the 3D printer by printing an ABS plastic gear, Enigma emulators and cryptographic techniques, a wonderful 1983 ATV expedition video to Mt Ossa (1617 m) thanks to Winston VK7EM who participated and digitised the video, the HPSDR Alex band pass filters demo, Lo-Key and *AR* articles, the Balloon-borne Large Aperture Submillimetre Telescope (BLAST) – launched in the Antarctic late in 2010, photos from Warren VK7FEET of a recent trip to the ACMA Quoin Ridge RF monitoring station, LCD backlighting techniques and much more and that was just the show and tell, the video presentations where just as interesting...HIHI! Do you realise that you do not have to be a radio amateur or need any ATV equipment to participate in the DATV Experimenter's nights – in Hobart it can be received via standard DVB-T set top boxes or via the internet at the stream outlined earlier. See you there.

Silent Key

Bob Oakley VK7FRMO

With regret we announce the passing of Bob Oakley VK7FRMO.

From the mid-1970s Bob was very active on the 11 m CB band and in 2007 he passed his Foundation licence exam and became VK7FRMO. He operated from his home on the Don Hill near Devonport.

Bob succumbed to cancer after a battle lasting about three years. He had a private burial service followed by a memorial service in Devonport for friends and associates.

He is survived by his wife Sally, daughters Emma and Eve and several grandchildren.

Vale, Bob VK7FRMO.

Submitted by John VK7FOXX and Winston VK7EM.

BUNYA MOUNTAINS AND DISTRICT AMCOM
AMATEUR RADIO & COMMUNICATIONS IN THE 21ST CENTURY

HAM AND WINE FEST 2012

4 FEBRUARY 2012 AT MACLAGAN

COME ALONG AND JOIN IN THE FUN OF A HAMFEST TOWARDS THE WEST

Entry $5.00
Doors open 9.00am
(Sellers 7.00am to setup)
BBQ 9 am till 2.00 pm
Coffee and tea all day
Cold drinks and bikkies
Table bookings $10
Lucky DoorPrize

There will be the usual new and preloved gear for sale by various groups and individuals.

Also if your group would like to do a demonstration of any aspect of our great hobby, you are most welcome to do so, this could be, Home brew gear, servicing gear, APRS, D-STAR, slow scan.

This list is long, so we are looking for expressions of interest.

Table bookings will need to be made by **Friday 20 January 2012,** late bookings will be accepted, but an extra fee will apply.

There are two wineries nearby, and one of these has a B & B and camping facilities.

Or you can visit the beautiful Bunya Mts near by, there are camping and picnic grounds available as well as cabins and houses to rent, if you want to stay a night in comfort.

Maclagan is located about a forty minute drive North East of Dalby and about a fifty minute drive North West of Toowoomba Qld.

More info please contact: Rick *VK4NRL@wia.org.au* or Neil on *holmzie@bigpond.com*

Official opening of the Adelaide Hills Amateur Radio Society Inc (AHARS) training and operations 'shack'

John Elliott VK5EMI - AHARS Newsletter Editor

Photo 1: Chris Platt VK5CP addressing the assembled guests, with AHARS President David VK5KC to his right.

On Saturday, 3 September, 2011 about 70 people from the hills and suburbs attended this prestigious event in central Blackwood.

Guests of honour included the local mayor, Michael Picton, Trish Pratt, State Commissioner for Guides, Wendy Davis, SA International Adviser for Guides, and Jan Childs, District Leader and Belair Guide Leader. Many dozens of curious radio amateurs and friends, anxious to see what our AHARS working parties had managed to create, came from the far reaches of the Adelaide area to check it out.

The building, which had largely fallen into disuse, is now a fully refurbished and comfortable venue. It has been fully lined, carpeted, and converted into a training and hobby construction facility. Our thanks go to the Girl Guides Association for giving us the opportunity to put it to use, and to those members who laboured on weekends to convert it, under the guidance of Club President David Clegg VK5KC.

David opened the proceedings, outlining the operations and history of the club, and the planned use of the building. He was supported by Chris Platt VK5CP, a Director of the WIA. Barry Williams VK5BW and Roy Gabriel VK5NRG were presented with plaques for their outstanding efforts relating to the refurbishment. David also thanked the many others who assisted regularly.

The building was officially opened by Christine Taylor VK5CTY, a long-term member of AHARS, whose husband Geoff VK5TY (SK), guided the Society from being a small club to a large and very successful society. AHARS now boasts about 150 members.

Special club visitors to the opening included Life Member Gordon Welsh VK5KGS, Bryan Scott VK5NOS and Hans Smit VK5YX, who are all foundation members of the society. Greetings from the society's first President, Marshall Emm VK5FN/N1FN, now living in Denver, Colorado were read out at the ceremony.

Information relating to the shed and other club matters can be obtained from a committee member or obtained from our comprehensive website *www.ahars.com.au*

AHARS' main meetings will continue to be held at the Belair Community Centre, on the third Thursday evening of the month. Additional information on AHARS activities can be found in VK5news.

Photo 2: Guests of honour at the opening: Christine Taylor VK5CTY, second from left, with Girl Guide officials Jan Childs, Trish Pratt and Wendy Davis.

Adelaide Hills Amateur Radio Society overcomes some advanced technology

Rob Gurr VK5RG

Although catering for modern techniques, the AHARS members recently met the new miniaturisation trend in radio construction methods head on.

Resistors, used frequently in all forms of radio and electronic equipment, have for years been manufactured with wire leads, suitable for soldering or otherwise connecting these components to others in a piece of equipment. Modern techniques now utilise 'surface mount' methods, where resistors and other components are no larger than a grain of wheat.

AHARS members hard at work sorting and packing the huge supply of resistors purchased.

Manufacturers of electronic components now almost universally manufacture only these miniature items, making it impossible to obtain replacements for the components used previously for the manufacture of valve and other earlier transistorised equipment.

The inability of some older members and beginners to utilise these new items made it necessary for the AHARS to undertake the purchase of large remaining stocks of these now scarce items. They solved the problem by buying a quantity of 1,700,000 resistors, of 84 different values, on behalf of other South Australian Radio Clubs, and undertaking to assemble them in packs of 8,400, being 100 of every value.

After purchase, and planning a method of counting, about 30 members of the Society gathered together for a three hour marathon, at the Club Rooms in the Belair Community Centre. Photographs are attached.

The project assisted the Society financially, and also helped many new members to understand the type of components and construction methods they will encounter in following this practical aspect of the hobby of amateur radio.

AHARS meets regularly with formal lectures and demonstrations at 7.30 pm on the third Thursday of each month, at the Belair Community Centre. Visitors and new members are always welcome. For details, contact the Secretary, on 0407 833 843, or the Publicity Officer on 08 8379 1889. Alternatively, check out our Web site *http://www.ahars.com.au/*

tts systems

www.ttssystems.com.au

Phone: 03 5977 4808 Email: info@ttssystems.com.au

Your Australian reseller for:

BUDDIPOLE

LDG ELECTRONICS

spiderbeam high performance lightweight antennas

Palstar

...America's Best! TEN-TEC

VIBROPLEX

AVAILABLE NOW

Hard Drawn Copper Wire
Insulators, Dipole Centres
Open Wire Transmission Line
Spreaders, Kevlar Guy Line
Spiderbeam Fibreglass Poles
Baluns and Switches

SGC

Meanwell power supplies
Diamond products
Daiwa products
Technical books
Amidon products
Custom cables made to order

As always, you can get a free catalogue - just call!

VK3news Amateur Radio Victoria News

Jim Linton VK3PC
www.amateurradio.com.au

Centenary goes on air

For the month of November a number of registrations have been made by members to use the special callsign VK100ARV, which is well sought after and qualifies toward the Amateur Radio Centenary Award.

This year is the 100th anniversary of the Amateur Wireless Society of Victoria, formed in 1911, quickly changing its name to the Wireless Institute of Victoria, and which today is known as Amateur Radio Victoria.

A special QSL card is on offer for contact with VK100ARV. On the front it features defining words capturing the spirit of the founding of the organisation and a gallery of Presidents and the information panel on the back.

The Amateur Radio Centenary Award certificate has a montage of the organisation over the decades. Both the QSL card and certificate are worth obtaining for display and will show the Centenary logo.

Valid contacts with VK100ARV earn ten bonus points towards the award. Contact with VK3WI during the Remembrance Day contest, International Lighthouse and Lightship Week, and the Oceania DX Phone contest on 1-2 October, and the Oceania DX CW contest on 8-9 October also gain bonus points.

For Australian stations a total of 100 points is required and DX stations 25 points. Valid contacts with members during the celebratory period August 1 to November 30 earn two points towards the award.

For the names of those on the roster check the website for frequent updates, and for the award rules before submitting an entry.

Also in the celebration are stations set up in Victorian national parks operating under the Keith Roget Memorial National Parks Award (KRMNPA) rules on Friday, 18 November through to Sunday, 20 November. Get on and support them.

The Award Manager Tony Hambling VK3VTH *vk3vth@amateurradio.com.au*

The VK100ARV centenary QSL Card.

thanks all who have so registered for VK100ARV or the extended weekend focused on the KRMNPA.

The Centenary has already featured the successful, and world's first DATV QSO Party from the digital amateur television repeater VK3RTV. Peter Cossins VK3BFG recently gave a presentation of the highlights to Council which by all accounts went extremely well.

Centre Victoria RadioFest

The Centre Victoria RadioFest No 5 will be held at the Kyneton Racecourse on Sunday, 12 February, 2012 and include the first Australian demonstration of the new hardware/software alternative for generating digital television streams in the DVB-S format.

Generating full motion digital television for a fraction of the cost of other hardware-only alternatives brings digital television into the realms of possibility for any radio amateur. See just how easy it is to join this exciting area of our hobby.

The Organising Committee is continuing to work on the program for the major amateur radio event in Victoria. Further details next month or visit *radiofest.amateurradio.com.au*

The bookings are now open for the ever popular Traders Hall, Second-hand Market Places, and Club Corner.

Changes for the website

Council has discussed enhancements to the web presence of Amateur Radio Victoria to make it easier for people to make direct contact with those responsible for various activities.

These range from Education, Events, Awards, Digital Amateur Television plus points of direct contact to the President and Secretary.

Also discussed were ways to make on-line payment of subscriptions. These changes will take a while to implement and is dependent upon the software used.

There can be no doubt that having a very good web presence is vital to the well-being of all organisations in this online world, giving a window on the world to members, would-be members and newcomers to our hobby.

Next class session

Enrolments are open for the Foundation Licence session to be held on 3-4 December. For enrolment or more details contact Barry Robinson VK3PV via email *foundation@amateurradio.com.au* or telephone 0428 516 001.

Spotlight on **SWLing**

Robin L Harwood VK7RH

2011 is rapidly coming to a conclusion. More major broadcasters will have departed when the B-11 broadcasting period commenced at the end of October. Sadly this is going to increase at the end of March. Radio Netherlands Worldwide is changing its format from airing programs on Dutch affairs to become an international free speech station. Also they will be closing both the Bonaire and Madagascar relay stations during 2012. The latter will be put up for sale. Some of you may have heard that World Christian Broadcasters, which operates now from Anchor Point, Alaska, has been constructing a new shortwave relay station in Madagascar but at a different site from RNW. They may be miffed that the existing senders are up for sale, just as they complete their own station.

Whilst on Madagascar, I note that the government station has been heard on 5010 or 4910 around 1600. Most have noted that it is USB with carrier. They cannot seem to make up their mind what channel to use but 4910 is better than 5010 I am informed.

Propagation improved in September but there was also major solar disruption. I am pleased that there is improvement at last and one never knows from day to day what will pop up. Indications are that the 22 metre broadcasting band and the adjacent 21 MHz amateur allocation may be picking up. I believe that there will be surprises there over our summer months.

Libya has had a change of government, following the ousting of Gaddafi. The shortwave senders fell silent and have not reappeared. It is unclear if they will, or if they may have been damaged or perhaps even destroyed by NATO bombing.

I believe Radio Australia may be going to use 19000 to Asia in English. Yes there is a small band there but the only station utilising it was an American evangelical broadcaster. I think the lousy propagation and few listeners forced them to abandon the channel. It may be an experiment to see if 19000 is feasible from both the propagation perspective and number of listeners. I do not have the exact times but could be around 2300 to 0100, which is around our local midday.

If you have any news, please feel free to email me at *vk7rh@wia.org.au*

73 de VK7RH

The Centre Victoria RadioFest

Returns to the Kyneton Racecourse
Sunday 12th Febuary 2012
For all the latest information visit
www.radiofest.amateurradio.com.au

Your Electronic One Stop Shop

Jaycar Electronics - Better, More Technical

18 Piece Stainless Steel Mixed Bit Set

A collection of commonly used driver bits in a handy rubber edged case. Features a bit locking mechanism for stable driving. All stainless steel. Driver not included.

- Set contains:
  Torx: T10, T15, T20, T25, T30, T40
  Flat blade: 3.5, 5.5, 6.5
  Philips head: 1, 2, 2, 2, 3
  Hex: 4, 5, 6
- Case dimensions: 115(L) x 50(W) x 31(D)mm

TD-2111 $29.95

Cat III 4000 Count Autoranging DMM NEW

An accurate and easy to use autoranging DMM. Select the parameter required and the meter chooses the appropriate display range. Features temperature, capacitance, data hold and auto power off plus a backlit display for measuring in dark places.

- Display: 4000 count
- Dimensions: 150(H) x 70(W) x 50(D)mm

QM-1327 $34.95

Cat III 2000 Count Inductance/ Capacitance DMM

A feature packed DMM with inductance & capacitance measurement. Ideal for audio enthusiasts designing their own crossovers. Features large LCD, inductance, capacitance, data hold, auto power-off, and temp measurement. NEW

- Display: 2000 count
- Hfe transistor test
- 10A AC & DC current
- Diode test
- Audible continuity
- Dimensions: 195(H) x 92(W) x 55(H)mm

QM-1548 $49.95

Digital Sound Level Meter

Featuring a wide dynamic range from 30 to 130dB, it can measure both A and C weightings and can have fast or slow responses to get an 'ambient' reading or a short noise. Includes data hold and min/max functions, as well as tripod mount. Supplied with carry case, wind sock and battery.

- Dimensions: 210(H) x 55(W)mm

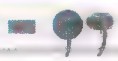
QM-1589 $99.00

Check the voltage output of a car's battery quickly and easily. Simply plug this handy voltmeter into the cigarette lighter socket and get an instant readout of the electrical system's voltage.

- Display resolution: 0.1V
- Operating voltage: 8 - 30VDC

QP-2220 $19.95

Smart Powerboard



6 way smart powerboard with digital energy power board. One socket never switches off and one 'smart' outlet can be used for main appliances. When the main appliance is switched off it will then switch off other related items. LCD display shows energy consumption which is easy to use and simple to set up.

MS-6152 $59.95

Retractable Cigarette Lighter Extension Cord

Handy for 4WD & camping use, this three metre extension cord retracts into its rugged housing to keep it protected & tangle free.

- 5 amp fuse
- Power indicator

PP-1990 $16.95

This compact HID torch is extremely powerful & affordable. Comes in a machined aircraft grade aluminium and is finished in anodised black. It is supplied in a case which holds the torch, mains and cigarette lighter chargers included for recharging the 2200mAh Li-Ion battery.

- Output: 2500 lumens
- Burn time: 40 minutes
- Dimensions: 235(L) x 70(Dia)mm

ST-3361 $199.00

To order call 1800 022 888
www.jaycar.com.au

Jaycar Electronics
Better. More Technical

VK2news

Tim Mills VK2ZTM
vk2ztm@wia.org.au

Photo 1: Cutting the Anniversary Birthday cake - Henry VK2ZHE and Arthur VK2ATM.

Most readers should be aware of the Inquiry released late September into NSW state planning laws and the effect that this could have on amateur antenna heights. Much information has been released through the WIA which included requests of input from radio amateurs. If you have something to contribute - please follow instructions given on the WIA site.

WICEN NSW held their AGM on 3rd September at Auburn. WICEN NSW, being an Association, had the members present vote in a new Constitution to conform with recent changes introduced by the Department of Fair Trading. The incoming committee has Malcolm Alexander VK2YVA as President and Crompton Allen VK2HRX as Senior Vice President. The position of Junior Vice President went to Julian Sortland VK2YJS until the new constitution is ratified by Fair Trading, when he becomes a committee member and Crompton becomes Vice President. No one put up their hand for Secretary at the meeting and Steven Heimann VK2BOS remained as Treasurer. The committee members appointed were Allan Hirschel VK2VEC, John Harper VK2FCOM and Andrew Vaughan VK2XPT. Contact with WICEN NSW may be made by email to *operations@nsw.wicen.org.au*

HADARC and WICEN are working together to re-establish repeater facilities at Chatswood.

The **Oxley Region ARC** celebrated their 40th anniversary with a lunch on Sunday 2nd October at Port Macquarie. There were 40 in attendance on a rather wet day, which did not detract from the enjoyment of the occasion. The club had been formed in 1971 to develop a two metre repeater for their region. Lucky door prizes were presented with the major one donated by Radio Supply going to Bill VK2ZCV. The second draw – provided by Jaycar of Port Macquarie – going to Judy VK2HZV. For those without callsigns, prizes were won by Linde Court and Dee Pilley. The special callsign VI40BOR finished at the end of October. ORARC will be setting up an APRS two metre facility at the VK2RPM site. The club's Christmas party will be on 3rd December at the Settlement Point picnic grounds.

Next month the **Illawarra ARS** will be judging their crystal set construction project. **Summerland ARC** has a Foundation course over the weekend 29/30 October.

In December it will be the Centenary of the 1911 – 1914 Mawson Expedition to the Antarctic mainland. Amateur radio was represented by Wally Hannam VK2AXH who was chief wireless operator. He had also been the first secretary of the March, 1910 meeting of Experimenters, which is today's WIA. Part of the December celebrations is planned to have a gathering in Tasmania of descendants of the expedition. On 2nd August, Australia Post issued a special stamp set for the Centenary. There are five stamps in the issue.

On Sunday 4th September **ARNSW** hosted at the VK2WI site a centenary birthday gathering for Life Member Pierce Healy VK2APQ. Pierce had reached his Centenary on 14th August. A number of VK2 amateurs attended the gathering. Pierce has recently moved to a southern Sydney nursing facility where some limited communications facilities have been arranged so he can be on air. Pierce has given his home station installation to the Kurrajong Radio Museum where Ian VK2ZIO will re-install it as an example of an amateur shack of recent decades.

ARNSW conducted a Foundation course early September with six successful candidates. Another course is considered before years end. The last Sunday of November (27th) is the final Trash & Treasure for the year at VK2WI, and the Home Brew and Experimenters Group meet in the early afternoon. Also during the morning there are exam assessments. Should you know of anyone wishing to undertake an assessment for any licence grade or for a Foundation course, have them email education@arnsw.org.au or telephone 02 9651 1490. Details of equipment items on offer and other information can be found on the ARNSW web site *www.arnsw.org.au*

73 – Tim VK2ZTM

Photo 2: One of the well populated tables at the 40th Anniversary Dinner.

VK3news

Geelong Amateur Radio Club - The GARC

Tony Collis VK3JGC

Photo 1: The GARC set up at Point Lonsdale – Photo courtesy of VK3BA.

Photo 2: Ken VK3NW operating.

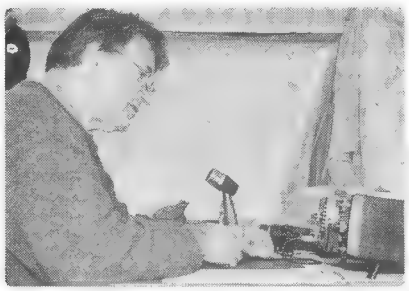


Photo 3: Gerhard VK3HQ operating.

ILLW at Port Lonsdale

Amongst those taking part in the event were Dallas VK3DJ, Nik VK3BA, Gavin VL3FGMV, Dana VK3FDJV, Lee VK3PK, Lou VK3ALB, Jenni VK3FJEN, Michael VK3FMIC, Ian VK3ZIB, David VK3QM and Ken VK3NW. The site and activities attracted a lot of visitors including an overseas member of the ILLW committee. There was no access available to the existing site buildings so Lou provided his caravan (portable shack), Lee and Garry brought sleeping vans and Nik brought a petrol generator to power the site. The weekend weather was absolutely ideal and 139 contacts were achieved.

Silent Key

Arthur Hughes VK3POM

It is with regret that we report the passing of Arthur Hughes VK3POM on Monday, 19 September, aged 95. Arthur was an active member of the GARC from the late 1970s to the late 1990s.

COM-AN-TENA

Australian made antennas setting a new standard

5/8 10/11 m vert 60 mm base h/duty	$255
Log-periodic 9 el. 8.4 m boom	$1194
20 m 4 el. boom 7.9 boom h/duty	$796
NEW 10 to 80 all HF/ mobile vert 12 volt Reversible motor 1.1 base top 1.3 m. Includes all cables and d.p.d.t. switch	$338
15 m 3 el. 3.6 m boom	$314
M/b vert auto switch 10-80 m	$360
40 m lin load 2 el./cap hats	$670
6 m 5 el. 3.6 m boom	$314
23 cm 36 el. 2 m boom N-conn	$249
70 cm hi gain Yagi 3 m boom	$170
2 m 10 el. hi gain Yagi	$190
Quad 2 el. 20 m h/duty	$596
Delta loop 2 el. 10/11 m	$319
20 M 3 el. confined space beam	$459
Rotatable dipole 40 m	$298

Guyed masts
13 or 21 metres

Winch up, tilt-over, aluminium and stainless steel three sided construction. Auto brake winches.

115 John Street
Glenroy VIC 3046

Phone
0419 542 437

An audio compressor/AGC circuit

Dale Hughes VK1DSH

The need for this circuit came about while using a phasing type transceiver that I had built. The transceiver did not have any sort of Automatic Gain Control and this detracted from the otherwise fine performance of the unit. If a strong nearby station came on air when I was working a weak station at adequate volume, I would be scrambling for the volume control! That problem has now been solved.

A search of my text books and the internet came up with a few designs; most designs used a junction field effect transistor as a gain control element and some others used a light emitting diode – light dependent resistor combinations as gain control elements. I came across a circuit published in EDN magazine in August 1998 which had an appealing simplicity and which promised good performance. The EDN version used a P-type JFET and NPN transistor as the gain control elements. Not having any P-type JFET's, I used an N-type JFET and a PNP transistor instead, however the performance was poor with the components I had chosen.

After playing around with the circuit arrangement and component values, I realized that the JFET characteristics were an important variable. I then modified the circuit so that the gate bias could be adjusted to an appropriate point of the device characteristic curve. The circuit was now well behaved and showed significant promise for an audio AGC circuit that could be used in my receiver. The circuit is shown in Figure 1.

Tests of the amplifier while adjusting the gate bias voltage (measured at test point Vb) also revealed an interesting property of the circuit: that the gain and the point of compression could be changed by varying the gate bias voltage. Furthermore, the adjustable gate bias

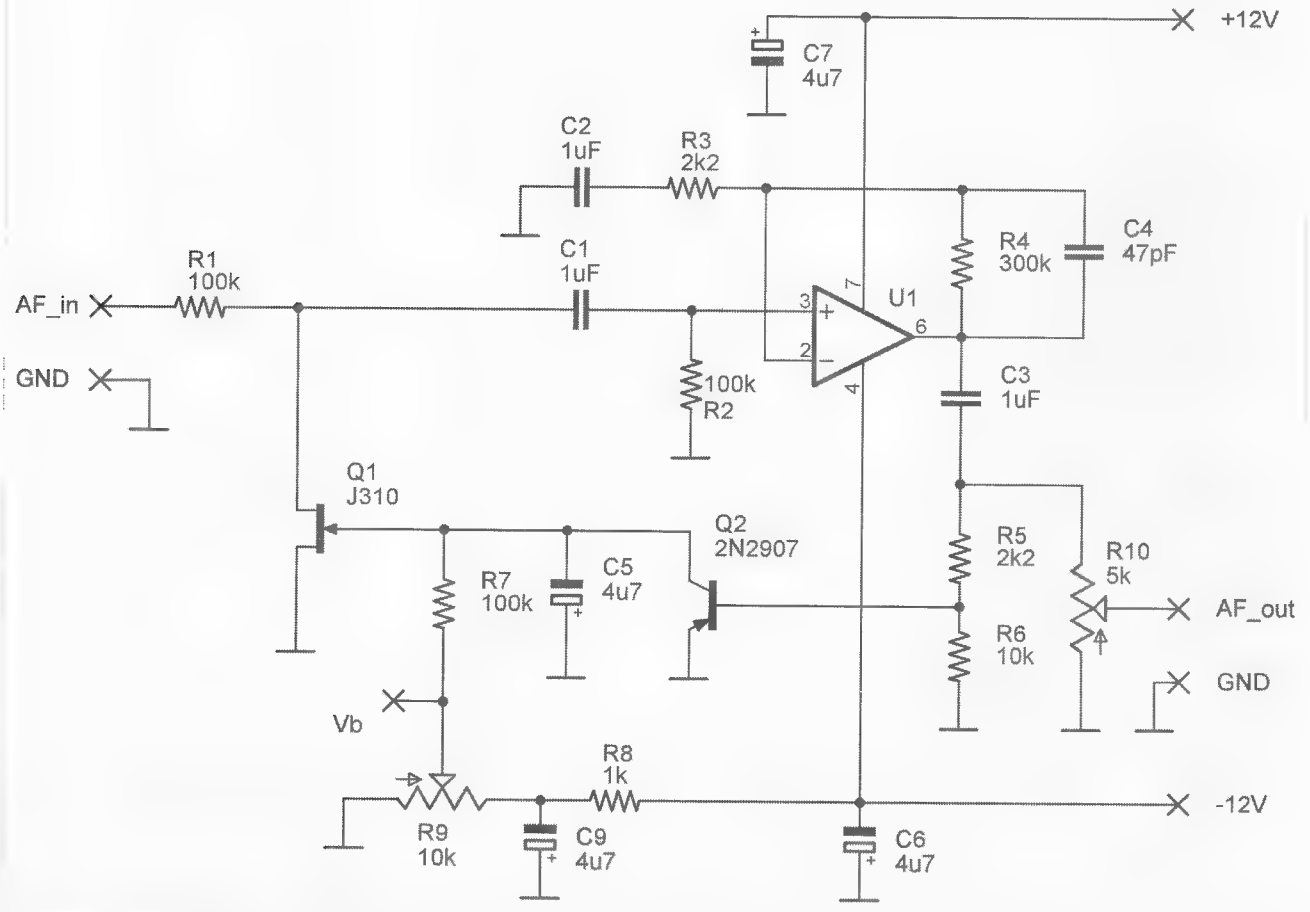


Figure 1: Schematic diagram of the amplifier. Integrated circuit U1 can be almost any low noise op-amp, the prototype used an NE5534 device. Q2 can be any small-signal PNP transistor. J310 JFETs were used in the prototype, but other types should also be suitable providing the appropriate gate bias is set. Capacitor C4 may not be needed for other types of op-amps, but it was necessary to suppress high frequency oscillation when using the NE5534 device. The gate bias can be measured at test point Vb as this is relatively isolated from the actual device gate.

meant that JFETs with quite different characteristics could be used and that reproducible figures for amplifier gain and compression point could be set by varying the gate bias while making some simple audio gain measurements. Three J310 JFETs were tested in the circuit and Figures 2, 3 and 4 show how the gate bias voltage (Vb) changes the circuit performance and allows the user to adjust the operating parameters for the compressor to suit the application and the characteristic of the JFET being used.

The circuit functions by using the JFET Q1 as a variable resistor in the signal path. The 'no signal' gate voltage is set by potentiometer R9. As the input signal increases the amplifier output is rectified by Q2 which is turned on and the gate voltage is pulled towards ground. As the gate voltage is lowered the drain-source resistance of the JFET is reduced and this shunts more of the increasing input signal to ground reducing the amplifier input by a sufficient amount to maintain a constant output level. The decay time of the gain control is set by C5 and the value shown gives a decay time constant of several seconds which is good for SSB reception. Attack time, that is the response time to input peaks, is very fast. The overall output level of the circuit can be set by potentiometer R10.

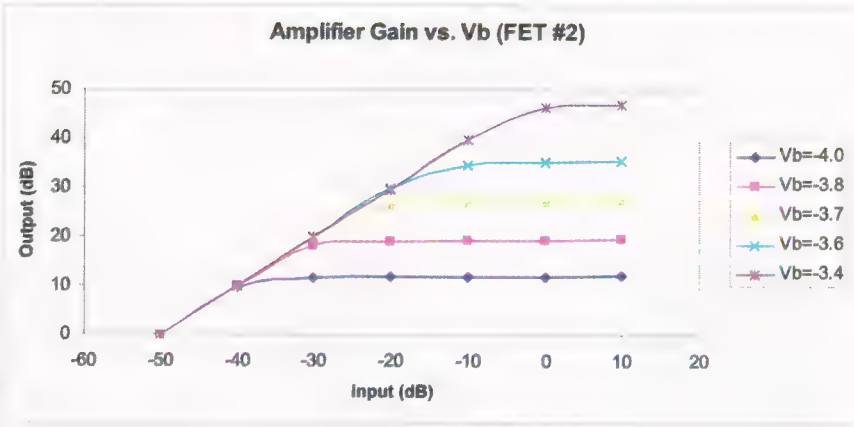


Figure 3: Circuit operation with JFET #2

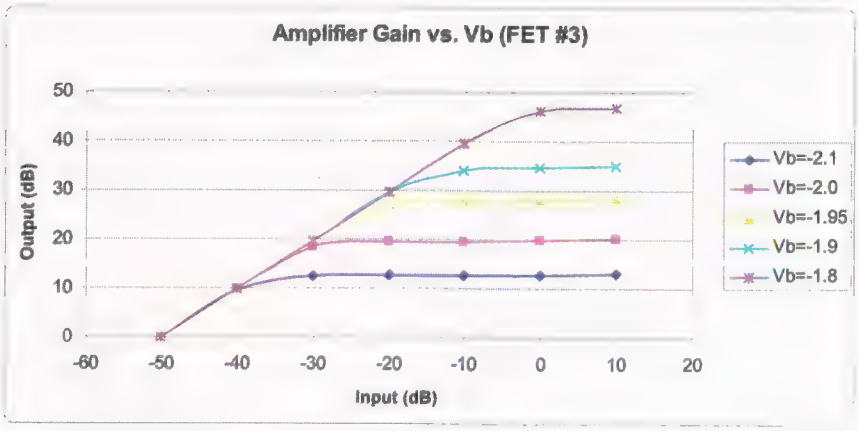


Figure 4: Circuit operation with JFET #3.

Given the simplicity of the circuit, its performance is remarkable. It has a wide dynamic range, low noise figure and a wide bandwidth. In addition, the circuit adds virtually no distortion to the signal. A simple test for distortion is to play recorded music through the compressor; except for dynamic range the audio quality of the output should be identical to the input signal with no evidence of clipping or other effects.

The circuit was built on a small piece of 'Vero' board and placed between the detector output and the volume control. Potentiometer R10 was adjusted so that the output amplitude was the same as the input amplitude up to the point at which compression started. In my case, that level was about 10 mV.

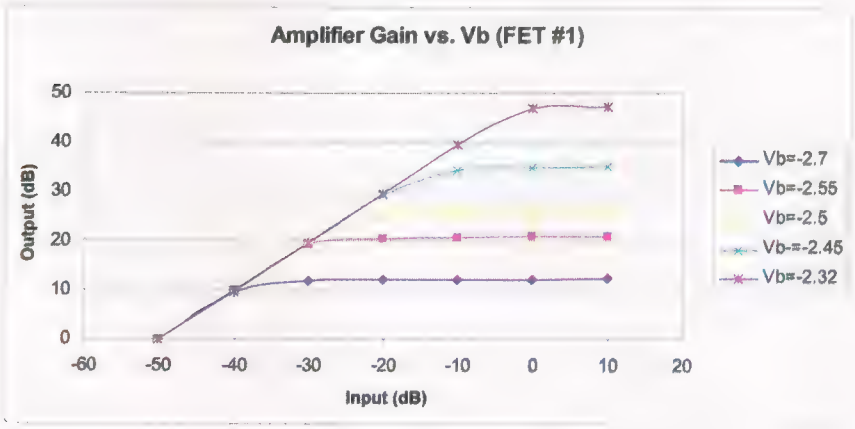


Figure 2: Circuit operation with JFET #1. For clarity, the gate bias voltage (as measured at test point Vb) of each JFET was set to a value to give similar gain to the other devices. The input and output values are relative to the -50 dB input, which was approximately 1.8 mV at the amplifier input. The output voltage was measured at pin 6 of the amplifier and the actual voltage output to the following stage can be set by R10. Note the significant difference in gate voltages between JFETs for the same overall amplifier gain. Each JFET was the same type number (J310).

Conclusion

The audio AGC circuit described here is a useful circuit where a constant amplitude signal with low distortion is required. The circuit allows the user to optimize the amplifier gain and compression point, as well as allowing the use of different JFETs as the gain control element.

ARDF championships a success -

Report on the 8th IARU Region 3 ARDF Championships

Jack Bramham VK3WWW – WIA ARDF Coordinator

Photo 1: The ARDF competitors, officials and dignitaries after the opening ceremony.

Over the last 12 months or so a dedicated group of volunteers had been working in preparation to hold the 8th IARU Region 3 ARDF (Amateur Radio Direction Finding) Championships in Australia. The host society was the WIA and the event was organised by members of the Victorian ARDF Group. Organising an event of this magnitude is no easy task. Conducting the actual competition is the easy bit; it is all of the other things such as International Correspondence, International Teams local transport, meals and

Photo 2: Chinese competitors testing their receivers at the Model Event.

accommodation for 130 plus and many other things which form the bulk of the work. Over 50 volunteers were required so each of the events went off without a hitch. As WIA ARDF Coordinator I must thank all of those who gave up their time to assist with the event. Not all of the volunteers came from the amateur ranks. Many were recruited from the Orienteering side of the sport. I would also like to thank Orienteering Victoria and the many orienteering clubs that loaned infrastructure for this event.

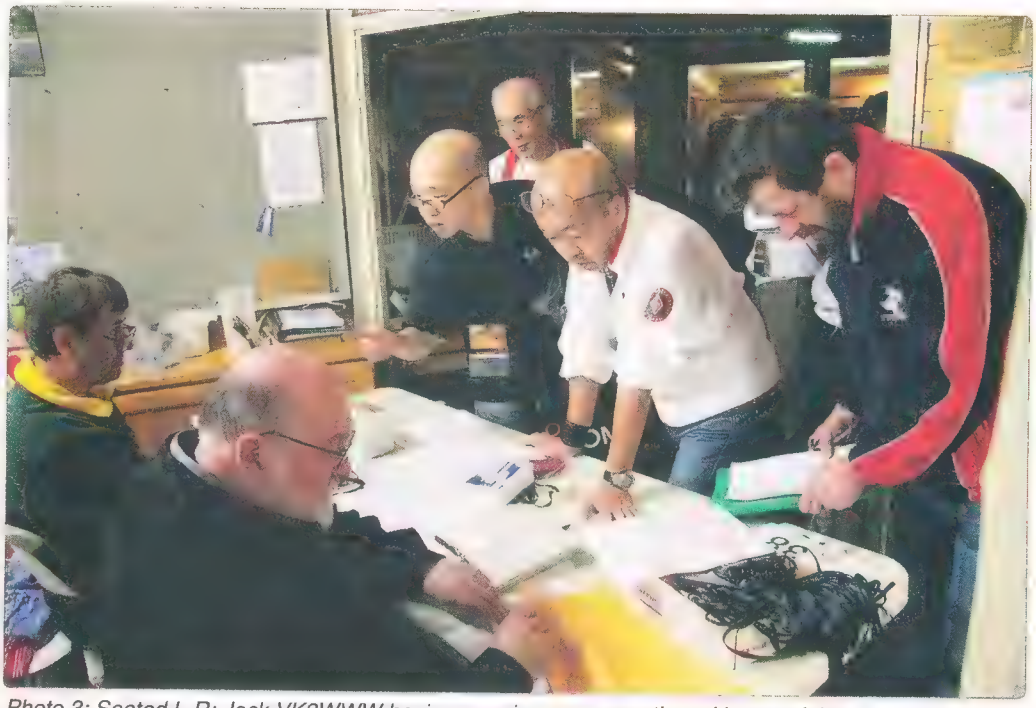


Photo 3: Seated L-R: Jack VK3WWW having a serious conversation with one of the Japanese competitors. John VK3PZ is checking off the registration sheet and standing is Ewen VK3OW making sure each of the late arrivals has a bed for the night.

Participants for this event were made up of Australia (WIA) 19, China (CRSA) 34, Japan (JARL) 31, Kazakhstan (KFRR) 1, Korea (KARL) 6, Malaysia (MARTS) 2 and USA (ARRL) 3 totalling 98 competitors. Added to the competitors list there were team officials, trainers and International Referees. So, as you can see it is really a major event for us here in VK.

Weather for all five days was really fine with the only bad patch being the Tuesday morning just before the 80 m event when the heavens opened, dampening the course referees and the team setting up the infrastructure for this event. By the time the competitors arrived at the start location, the weather had improved considerably, to a point where the event was held and no more rain fell on the course.

Friday 23 September was arrival and registration day. Some international teams had arrived early and had been touring VK3. Listening to them, the most popular tourist spot was the Great Ocean Road and the Twelve Apostles. Teams started to arrive at the Blue Light Camp in Maldon around 1400. John VK3PZ and his team were very busy making sure all of the information for each of the team members was correct and Ewen VK3OW made sure all had a place to sleep. Registrations continued well into the night with the last bus arriving about 2200.

By Saturday morning most had settled in well and once breakfast was over everyone was loaded onto a bus to attend the Model Event. This event is for competitors to get used to our local weather and bush conditions also test out their equipment by DFing up to 10 transmitters (5 x 2 m, 5 x 80 m) set in a state forest with a real map. Following the Model Event competitors were invited to participate in a Street-O and Fox-Or event around the local streets of Maldon.

Photo 4: Wu Qiuyang, Chinese competitor, exiting control point 1 en-route to the finish.

I am sure the locals were very confused about what was going on. For information regarding these styles of events I suggest you look at *www.ardf.org.au* where you can find an explanation for all sorts of Orienteering and ARDF type events.

Saturday was a very active one for after the local events it was off to the opening ceremony where both Michael Owen VK3KI (IARU Region 3 Chairman and WIA President) and Yoshio Arisaka JA1HQG (IARU region 3 ARDF Chairman) welcomed everyone. After the opening ceremony there was an opportunity to take a group photo with all of the teams wearing their country kit.

Sunday 25th was the first event. This event was contested on the 2 m band, and until this time most of the competitors were very tense. After the 2 m competition you could sense that most of the tension has passed and competitors opened up a bit and started to form friendly relationships with competitors from other teams. That evening organisers put on a DVD night showing a few local amateur radio related videos. One of the videos was from the Melbourne Foxhunt that was recorded by a Norwegian film crew. This confused a few of them trying to work out what language was being spoken.

Monday 26th was a rest day but, not really. Competitors and officials met at the Maldon station in preparation for a vintage steam train trip to Castlemaine. From the Castlemaine station they were then taken by bus to Bendigo and after an Aussie BBQ lunch they headed underground for a tour of the Central Deborah Gold Mine.

Photo 5: One of the ARDF control points.

Tuesday 27th was the second event and as earlier mentioned it rained as we were setting up the course. After the 80 m event everyone headed off to the Baringhup Community Hall for the closing ceremony banquet and medal presentations. Michael Owen VK3KI and Robert Broomhead VK3DN took control of the microphone and presented all of the medals gained during the two competitions and Dianne Shalders VK3FVXN presented the awards for the Combo event. Medals were not presented for all of the age categories but to give you an idea on how many categories there can be they are as follows. W19, W21, W35, W45, W55, W65, M19, M21, M35, M45, M55, M65. With the exception of the 19 category which is actually up to the age of 21 all of the other categories' ages are grouped in 10 year segments. So, you really are only competing against competitors very close to your own age.

In closing I would like to thank all of the volunteers who assisted, our sponsors, Blue Light Camp management and staff, plus all of the local land owners who were kind enough to let competitors cross their land. Boy, there are so many to thank, it is difficult. So, if I have missed anyone important I must apologise.

There will be a video DVD of the event and it will be available soon. For more information regarding the DVD have a look at: *www.r3.ardf.org.au*

See more images page 56.

Photo 6: Takayoshi Suzuki JS2FSG on fire as he approaches one of the 2 m ARDF Controls.

Simple balanced line protector

Justin Giles-Clark VK7TW

The author's main HF antenna is a G5RV dipole strung across the backyard. I use 300 ohm TV balanced line for the 10 metre (34 foot) matching section. This matching section runs very close to an outer brick wall and it bangs against that wall when the wind blows. My QTH is on the side of a valley which channels the prevailing wind down the valley and it blows the matching section against the west facing wall most days.

One day I tried to tune up the G5RV and found I could not. After inspection, I found that one side of the 300 ohm line had been worn away from rubbing against the brick wall and broken the conductor. The balanced line was replaced and a short length (~one metre) of 12 mm black plastic irrigation pipe was slipped over the 300 ohm line and held in place with cable ties each end to ensure it stayed in place. The irrigation pipe could also be put in place in situ if you were to carefully slit the irrigation piping and then place a few cable ties along the length of the irrigation pipe.

The 12 mm irrigation pipe covering the 300 ohm antenna line.

This arrangement has been in place for about four years and I have not had to replace the 300 ohm line since then. Not sure if this may also be another possible protection mechanism against those troublesome antenna loving cockatoos.

TET-EMTRON

NEW!

www.tet-emtron.com

Handy Centre Joint.

Large Corona Tip.

New HFTW Tapped Whip. New designing allows this whip to be separated in the centre for easy and clean storage in its own bag inside your car.
-Coated with thick, tough waterproof glue lined heatshrink.
-Covers amateur bands 80-6 m, as well as most popular 4WD and RFDS.
-Covers 160 metres with our new extension.
-Covers the long talked about 60 m band.
-Comes with it own drawstring storage bag.
-Large easy to read writing.
Does not include HF base and spring.

160 m Extension.

www.tet-emtron.com
TET-Emtron
80 Stock Road, HERNE HILL. WA 6056
Phone: 08 9296 3224

VK4 news

Eldon Bryant VK4FNQA

The 20th North Queensland Amateur Radio Convention

The 20th North Queensland Amateur Radio Convention was held from Friday 16th to Sunday 18th September, at Charters Towers, under the auspices of the Townsville Amateur Radio Club Inc (TARC).

The convention was officially opened by the Charters Towers Regional Council Mayor, Ben Callcott, who in his opening address recounted how HF radio, the Royal Flying Doctor Service and RFDS operator Vern Kerr VK4LK, plus a brand new RFDS Homestead medicine chest helped save his life as a lad on the land.

Activities were many and varied and included a home brew contest, a craft section, a produce section, several raffles, a Mystery Pressie auction, tours for attendees and partners to a number of the local tourist spots, and trade displays by Barry Dionysius VK4TBD of Navcom Electronics and Mark Rawlings VK6MOA of TET-Emtron that created a lot of interest from all present.

The Ken Robertson VK4KT Memorial Award was awarded to Steve Wood VK4SMW from the Central Highlands Amateur Radio Club, and will be presented to him at that club's AGM on Saturday, 1 October.

The event also welcomed some local press coverage, with John VK4FNQ featured in a half-page write up in the Northern Miner. Refer Photo 1.

From all accounts all enjoyed a wonderful weekend, with great weather allowing all to catch up with their fellow hams, and enjoy fully the wonderful location.

WHAT'S ON - Dining and Entertainment in Charters Towers

Radio enthusiasts unite

NOT many people can say they have made contact with life forms in outer space but Charters Towers man John Goldfinch can.

In 1998 Mr Goldfinch spoke to NASA astronaut Andy Thomas while he was in the Mir Space Station.

"I heard a skipper in a space shuttle and had around three to four minutes contact," he said

Mr Goldfinch is an amateur radio enthusiast and will be sharing stories just like this with other amateur radio operators at the 20th biennial North Queensland Amateur Radio Convention.

This is the first time the convention will be held in the Gold City and Townsville Amateur Radio Club Inc secretary and publicity officer Eldon Bryant said he expects around 50 people to travel from all corners of North Queensland to attend.

"Leaders in the deployment of and experimentation in communications and technology will be attending and some will be guest speakers," he said.

Visitors to the event can listen to technical lectures, browse trade displays and watch demonstrations and bid for items in the monster auction.

Mr Goldfinch is looking forward to the convention being held locally and said he will enjoy putting a face to the voice.

"I've been into amateur radio for a bit over 30 years," he said.

"It's a bit of a hobby, after school I played around with hand held radios and in 1979 I passed the novice exam."

Sitting at home in a room full of many different kinds of radios Mr Goldfinch said he has made contact with hundreds of people over the years nationally, internationally and of course, in outer space.

"There was a chap in Japan we used to talk to and he came to Australia and made a point of visiting everyone," he said.

Mr Goldfinch, who's main interest in is UHF radios, said has also spoken to Black Hawk pilots, priests, doctors and also Dick Smith while he was doing his famous balloon flight.

"It's something that doesn't happen everyday," he said.

The 20th North Queensland Amateur Radio Convention will run from September 16 to 18 at the Charters Towers RSL Sub-Branch.

Right – DO YOU COPY... John Goldfinch will attend the 20th biennial North Queensland Amateur Radio Convention this weekend

The article from The Northern Miner, 16 September 2011. Courtesy of The Northern Miner.

WIA Contest Website

Keep up to date with all of the major Australian contests, including rules and results, at the WIA Contest Website at:

www.wia.org.au/members/contests/about

VHF/UHF - An Expanding World

David Smith VK3HZ
vk3hz@wia.org.au

This month, once again, there has been an opening across the pond to New Zealand. All of the activity at the far end involved Nick ZL1IU.

On the evening of September 19 at 0926Z, Steve VK2ZT worked Nick on two metres with a 5x7 report. Shortly afterwards, Kirk VK2MER also worked him with at 5x5. Half an hour later, the opening had spread further north and Adrian VK4OX worked Nick at 5x3. They also managed a scratchy CW contact on 70 cm with a report of 419. At 1034Z, Col VK2KOL in western Sydney was somewhat surprised to work Nick giving a report of 5x1 and receiving a 5x3. Grant VK2MAX then joined the party, working Nick at 5x5. Adrian VK4OX attempted 70 cm again and was rewarded with an SSB contact with a 5x1 report.

The following afternoon at 0525Z, Adrian again worked Nick on two metres but the opening had almost gone with only a 5x1 report.

News from northern VK6

Rod VK6KP in Karratha submitted some news of interest:

For the very first time since arriving twelve months ago, I have heard YB FM on two metres. Our local repeater is located near Point Sampson about 40 km up the coast near Wickham (146.7 MHz). I had FM breakthrough from what was probably an Indonesian repeater on Java. I will try and find out a bit more about two metres from YB. Tropo is meant to be very good this time of year here and the locals regularly hear Indonesia and work into the Broome repeater (800 km north) or the repeaters further down south.

Another frequency that I have heard activity on from YB is 146.480 – simplex.

VK2KU DXCC

After much hard work, Guy VK2KU is very pleased to finally be in possession of his DXCC certificate:

Photo 1: VK4KSY mobile set-up.

Yesterday I was delighted to receive my two metre DXCC Certificate from the WIA. WIA DXCC certificates appear not to be numbered for each band (as with the ARRL), but rather by mode - in this case 'Data', that is, digital). Thus my certificate is numbered 00015 which appears to indicate that it is the 15th Data mode DXCC certificate issued by the WIA. Nevertheless I believe it to be the first DXCC Certificate for two metres issued by the WIA, and it carries a corresponding two metre EME endorsement.

Spring VHF-UHF Field Day

A reminder that the Spring VHF-UHF Field Day is on the weekend of November 26 – 27, commencing at 0100Z for the eastern states and 0400Z for VK6. There are six sections catering for portable single and multi-operator, eight or 24 hours, and Home and Rover operation. For more information, go to: *www.wia.org.au/members/contests/vhfuhf/*

Remember that while 150 is nominally the contest calling frequency, always try to QSY away from that frequency to have your QSO – that is what the big knob on the front of the radio is for. This will allow other, weaker stations the chance to get through.

There is expected to be more activity this year, particularly in the microwave region where many people have been busy constructing transverters that they now want to give a good workout. However, even if you just have an FT-817 with a whip, you'll still find plenty of people to work.

Please send any Weak Signal reports to David VK3HZ at *vk3hz@wia.org.au*

Digital DX modes

Rex Moncur VK7MO

FSK441 – VK4KSY portable QG61

David VK4KSY reports on his portable operation to the rare grid square QG61 near Warwick about 170 km west of Brisbane.

Got started at 4.45 am only to find ice all over the windscreen and washer jets frozen - in Qld? Luckily I carry extra water in the vehicle, so all over the screen and all good. Arrived at the position, frost everywhere and boy-o-boy the metal was icy cold. Height above sea level 480 metres.

First ping was from Rex VK7MO and then completed with Arie VK3AMZ and then Rex. And yes I am excited that it is a new grid square for Rex and Arie. Sent a report to VK3HY but the pings had dropped off by this time.

Best conditions were early - if I had this information I would have set up the night prior.

A good trip, but I like summer better. A new grid square for two contacts and some good signals (SSB) into VK2 on AE.

The mobile system, see Photo 1 below, consists of an eight element beam. Driven element copper pipe dipole with RG58 inner feed through the pipes and soldered at the ends. This gives a good flat SWR. Have used folded dipole feeds but they don't travel well in the trailer, vibration fractures the coax to dipole connection.

FSK441- VK4UH

Kevin VK4UH reports on his results as a 'newbie' on FSK441:

Photo 2: VK2AMS 1296 MHz dish.

I have been cranking away at MS activity on FSK441 for most of the Saturday and Sunday activity sessions for the last six weeks or so.

From my new QTH on House Mountain in the Samford Valley to the west of Brisbane, a site marginally obstructed to the south at low elevations, I have successfully completed QSOs, via meteor scatter, with the following stations:

VK3AMZ	*Arie*	*1,402 km*
VK3KH	*Michael*	*1,406 km*
VK3GHZ	*Rhett*	*1,263 km*
VK5DK	*Colin*	*1,621 km*
VK1WJ	*Waldis*	*943 km*
VK3HY	*Gavin*	*1,362 km*

Other stations have been successfully decoded or have reported signals from me but have yet to be completed.

Patience and persistence seems to be the key. The signal strength and duration of some longer 'burns' is nothing short of astounding. Signals received from distant stations close to my practical maximum distance, including VK7MO and VK5DK have been seen for over 20 seconds and well above the noise floor. Clearly only the bigger rocks are making the longer distances possible.

Interestingly other VK4 stations, not that far from the VK4UH QTH, have reported many decoded pings on days when I have seen almost nothing. And vice versa!

Small station 1296 MHz EME - VK2AMS

Mark VK2AMS reports:

Rex VK7MO thought I should write a short article on 'Getting Organised to try EME on 1296 MHz'.

I was given a 1.8 m dish, refer Photos 2 and 3, that was collecting rain water in a paddock so I decided to build an OK1DFC septum polariser with a choke ring for it then got sorted with Az (a Create rotator) and El (a Motech elevation control unit with an actuator) then got my son who is handy with a welder to help me construct a suitable support structure using 50 mm galvanised pipe and concrete footings - I knew I brought him up for something! I have had assistance from Ross VK2DVZ, a good mate, on setting the dish up

Photo 3: VK2AMS feed.

accurately using the shadow from the sun on the feed. I am currently using a MiniKits EME179 preamp with <0.4 dB NF at the feed (again I had valuable input from Dave VK2JDS) switched into a 50 ohm termination via a Transco 18 GHz relay and have a GS15B amplifier running 120 watts. I am using an FT-817 into a MiniKits transverter with a MiniKits amplifier running 10 watts as a driver.

I had an email from Howard G4CCH about trying for a QSO on the weekend. I thought I would see how things were going on Friday morning, 16 September before work so got on the HB9Q EME logger and said I was transmitting on 1296.065 JT65C. I was surprised to be able to 'see' DL6SH and we proceeded to complete the QSO - his best at -23 dB with my modest setup. This morning, 17 September, I had the good fortune of being able to complete a QSO with Howard G4CCH - best at -20! I am well aware that the 'big guns' are doing the lion's share but it nevertheless shows what is achievable with a small station so I am very happy so far with progress.

I have now severely pruned another tree and about to work on the XYL for a bigger dish!

Please send any Digital DX Modes reports to Rex VK7MO at *rmoncur@bigpond.net.au*

The Magic Band – 6 m DX

Brian Cleland VK5BC

As the sun became more active in September with many good flares so did six metres with good TEP openings throughout the month particularly from the northern areas of VK. Northern VK4s, VK6s and VK8s experienced many good openings into Japan, China, Korea Guam areas, and late in September into Hawaii.

Rod VK6KP and Michael VK6BHY in Karratha both experienced good TEP contacts to the north throughout the month. Rod reports the first sign of six metre activity returning to the NW was on 29 August with JA6YBR/B 559 – a few JAs not too strong plus 49 MHz offsets 9++. After that several good openings occurred as follows:

03/09/11 1032 UTC, BA4SI 50.110 599 CW,

1105 UTC, BA4SI 50.110 59+ SSB.

04/09/11 0905 to 1000 UTC, JAs mostly 3, 4 and 6.

13/09/11 0940 UTC, JA6GGD 50.110 59,

0946 UTC, BA8AG 50.102 599.

15/09/11 0950 UTC, BA4SI 50.110 559,

1007 UTC, BA8AG 50.102 599.

16/09/11 0932 to1100 UTC, JAs most areas plus 'dogpile' 110 trying to work a VK4SWE (Sweers Island),

1340 UTC, BV2YA/B 50.001 529,

1342 UTC, VR2SIX/B 50,075 539.

18 & 19/09/11 @1000 UTC onwards, many JAs plus BA, BV, VR and a lot of TV crud. FM signals 50.150 FSD?

20/09/11 again from 1000 UTC, very strong opening same as previous two evenings many signals 59++, @ 1031 UTC, BA4SI 50.110 599.

21/09/11 0812 UTC, JE6AZU 50.110 59+,

1020 UTC, HL5BLI 50.110 58,

1100 UTC, BV2DQ 50.120 55,

1140 UTC, JH1WHS 50.110 59,

1209 UTC, VR2XMT 50.110 57.

22/09/11 1100 UTC onwards, JA/BA all calling 110 strong TEP opening with a lot of TV crud,

1200 UTC, beam 315 degrees 48.250 S7 (Dubai),

1235 UTC, VR2HF 50.100 559.

23/09/11 1000 UTC, very strong TEP opening JA/DU/BA/VR - many BA stations calling 110. FM signal there again on 50.150,

1200 UTC, DU7/PA0HIP 50.110 58 off back of Willem's beam who was working BAs, JR6SEU 50.115 55 Okinawa.

25/09/11 1140 UTC, BV/B, VR/B TV crud and Dubai TV S3 with the beam north.

1142 UTC, VR2XMT 50.110 57/8. VR2HF there also and Willem DU7/PA0HIP 559.

28/09/11 0800-0900 UTC, very intense opening to JA with all signals S9+++.

Throughout the last week of September Dubai TV audible 48.250.

Michael's VK6BHY log is detailed below:

03/09/11 1058 UTC, BA4SI 5/9 +.

04/09/11 0927 UTC, JA6RJK 5/9, 09:32 UTC, JA6RJK 5/9 & 10:26 UTC JA1QOP 5/9.

11/09/11 from 0632 UTC, contacted 11 x JAs some big signals but most about 5/3.

17/09/11 0755 UTC, JR6EXN 5/3

19/09/11 1301 BM3GJ?

20/09/11 from 08-12 UTC, contacted 5 x JAs with signals between 5/3 and 5/9.

21/09/11 1209 UTC VR2XMT 5/3.

The last few nights have heard Charlie VR2XMT and Willem DU7/PA0HIP and short openings to JA.

25/09/11 1340 UTC DU7/PA0HIP 5/4.

Michael reports that on a few occasions he has not been able to hear any beacons but has put out a call and got a reply from Japan.

A little further south, Rick VK6XLR in Geraldton had a good start to the autumn season with 13 contacts into JA on 18 September. The band was only open for about 30 minutes starting at about 0540Z with most signals 5/9.

Meanwhile in VK4 regular JA openings occurred throughout September but the highlights were the openings to Hawaii late in the month. On 28 September contacts to Hawaii were made from as far north as Charters Towers (John VK4FNQ) and as far south as Hervey Bay (Wade VK4WM). Scott VK4CZ also reported hearing KH6SX in Brisbane. It was all repeated on the 29th with several Hawaiian stations working many VK4s with over S9 signals. Signals were particularly strong on the 29th into the Mackay and Hervey Bay areas. Kevin VK4BKP in Mackay worked KH6RH at 20 over 9 both ways and Wade VK4WM reported working KH7Y with signals over S9.

Brian VK4EK in Sapphire also got in on the KH6 openings working KH6U 5/1 on the 27th then on the 29th working KH6RH, KH7JJ, KH6HI all 5/8 and a little later KH7Y at 5/9. Brian reports Fred KH7Y was calling on both SSB & CW but unfortunately not getting many takers. Brian also worked several JA's throughout September with the best opening on the 22nd when he worked 12 in a row before taking a break.

Scott VK4CZ in Brisbane sums up the 28th as follows:

An interesting day on six metres. Just on midday, KH6SX was heard calling CQ on 50.110 CW RST519 - a very good copy albeit low in strength. Unfortunately a two way contact wasn't completed.

Soon after, at 0330Z the band swung to JA and many JA stations were heard with most signals RS59. A second TEP opening occurred just after sunset with very strong signals from JA, BA4SI was also worked. The following is a list of stations worked.

28/09/11 0344 – 0405 UTC, 50.145 SSB JH1WHS, JA7CSL, JH8HQA, JA8GMZ, JA8CAR, JR1SLT, JP1LRT, JA1JSC JA8CRB/7, JA8ANQ, JA1UAV, JM1HJG, JG1XGL with all signals 5/9.

28/09/11 0417 UTC, HL3ERJ 50.125 SSB 5/9 PM37NV.

28/09/11 0826 UTC, BA4SI 50.102 CW 519 539 PMØ1HD.

Meanwhile Phil VK4FIL in Brisbane also worked JA's on several days in September, the best being the 29th with signals up to 30 over 9 when contacts were completed with JP1LRT, JO7HAM, JA1UAV, JA1SFL, JA7CSL, JA8OW, JA8CRB/7, JH1WHS and HL3ERJ.

Wade VK4WM in Hervey Bay also completed a good month with contacts completed as follows:

04/09/11 0701Z CW JK1HCE 539

0910Z JJ2NKO 559

0917Z JR2TER 579

07/09/11 2211Z FK8CP 419

18/09/11 0503Z JJ3JZM/1 599 followed by 6 more SSB and 2 x CW JAs

19/09/11 0319Z SSB JM1WBB 41

22/09/11 1057Z CW JA4OK 599

24/09/11 0509Z CW JG1RVN 599

0512Z JG1SIS 599

28/09/11 0230Z CW 50.105 MHz Art KH7SX 559 on the Big Island then later on the band opened to JA, worked 2 x JA stations at 0402Z 59 sigs then later at 0759Zz worked another 17 x SSB including JR1SLT with a 59 signal using only one watt into a one element quad loop.

29/09/11 KH7Y 5/9.

Although I do not have details, VK8s in the Darwin area had many openings to the north in September and David VK5AYD in Coober Pedy worked several JAs throughout the month.

Certainly a good month for northern VKs on six metres. Let us hope we get some extension south in October/November.

Please send any six metre information to Brian VK5BC at *briancleland@bigpond.com*

2012 WIA Callbook

On Sale Now

For more details, head to *www.wia.org.au/members/bookshop/about/* or contact the WIA office on **03 9729 0400** between 10.00 am and 4.00 pm (EST).

As a special offer to all WIA affiliated clubs the WIA is pleased to offer **free delivery** for a box of 25 callbooks delivered direct to your club anywhere within Australia. Full details, including order form, are at *www.wia.org.au/members/clubs/clubpurchases/*

Silent Key John Lehmann VK4AZK (1936 -2011)

A genuine character of our hobby, John Lehmann VK4AZK passed away in his 75th year on 21 May, 2011. John was first licensed in 1963 as VK5ZHL. He obtained his full call, VK5HP in 1965. In 1968 John moved from Mt Gambier to Victoria and obtained the call sign VK3TN. He later moved to VK6 and VK8 for brief periods before moving permanently to Brisbane as VK4AZK.

John had a keen interest in VHF and UHF propagation and was a prolific constructor and operator in the 1960s and early 1970s. During that era, he operated firstly from Glenburnie (Mt Gambier) and later from Warrnambool and Mortlake in Victoria. He was a foundation member of the South East Radio Group (SERG) and was influential in the decision to hold the very popular SERG radio conventions at Mt Gambier. He was the 1966-1967 winner of the Ross Hull Memorial VHF-UHF contest and acquired several other awards for his VHF and UHF activities.

John was always there to lend a helping hand to others. At a time when most VHF/UHF equipment was 'home brewed' he helped many new chums to improve their equipment. Although self-trained in radio, John seemed to be one of those people that knew how to get things going. Whether it was tuning up a receive converter, building an antenna, helping to erect a tower or just telling you how things should be done properly.

John had rather unique ways of 'encouraging' others to build or improve their equipment which many of his peers will recall fondly. His keen sense of humour was often displayed during his on air contacts and some of his more famous 'vk5hp-isms' are still heard on the VHF bands occasionally.

Health problems restricted John's radio activities in later years but he never lost interest in the hobby and was always ready for a long chat about any aspect of the hobby. He held daily skeds with Rob VK4ZDX until shortly before his passing.

In more recent times, John provided assistance to an RSL Club in Brisbane. This activity involved tracing the histories of some soldiers that were listed on the club's WW1 and WW2 Honour boards but of which, little else was known. Sadly, that work was not completed. John was to have attended a meeting with RSL personnel on the day that he suffered a major health failure resulting in his passing a few days later.

Farewell John.

Submitted by Gavin VK3HY, Colin VK5DK and Russell VK3ZQB.

Silent Key Frederick Brian Conway Fargus VK4BCF

Late of St Paul's Villa, Bardon, in Queensland, Brian, as we was known, passed away peacefully on 19 September, 2011, aged 96.

Brian was born in Askham, Yorkshire, England. He served in the Grenadier Guards from 1934 to 1935, and in the 2nd NZEF Divisional Signals from 1939 to 1945, seeing service in the Middle East, Greece and Italy.

He was a radio announcer by profession, working initially for 1ZB in Auckland, before the outbreak of war interrupted his career. On his return after the war, Brian worked for a short period in Sydney radio, then with 4MB in Maryborough, in Queensland, before transfer to 4BC in Brisbane, where he remained until 1951.

Learning that Radio Trinidad was looking for staff, he applied for and was appointed to the position of Program Director, eventually completing two three-year contracts in this role. Shortly after returning to Brisbane he joined an advertising agency, where he eventually ended up as manager.

Brian became associated with 4MBS-FM from its very beginning and, after retirement, was a regular announcer for some eight years.

Contributed by Colin Hinxman VK4ACH.

Over to you

Dear Sir,

In the references appended to the article *An exquisite situation… on short unloaded whip antennas and the effect of shunt capacitance at their base*, *AR*, Oct 2011 (not 2100), page 35, my name has been misspelled. The correct spelling is CORTIS. A small point noted by a club member.

It is nice to think that someone actually read my article and decided to follow up my initial diagnosis with some detail experiment and theoretical analysis.

I am preparing an article on my recently constructed rotatable delta loop HF antenna using an auto tuner at the feed point to achieve multiband coverage. The antenna works on eighty metres to six metres. I just have to make time to draft the article.

Many thanks for producing a good magazine.

Regards,

Richard Cortis VK2XRC

The Porta-Loop: A loop antenna for MF reception

Peter Parker VK3YE

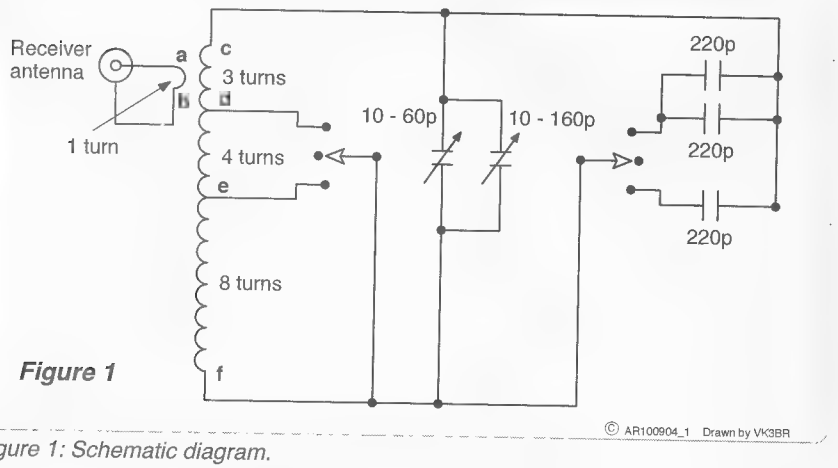


Figure 1: Schematic diagram.

One of the best antennas for long-distance MF reception is a rotatable loop antenna. This is typically built on a rigid frame up to one metre per side. Unfortunately these can be bulky and inconvenient to take to low-noise receiving sites.

Described here is a lightweight MF receiving loop for portable use. Made with flexible materials it is foldable into a small space and carried in a small bag. In use the antenna can be worn or hung in a tree. Frequency coverage is 300 to 5000 kHz, making it suitable for not only the AM broadcast band but also reception of 600, 160 and 80 metre scientific or amateur signals.

Benefits

The loop forms a giant tuned circuit brought to resonance on the frequency of interest. This provides additional selectivity – helpful when trying to hear a weak signal 9 or 18 kHz away from a stronger station. A sharp null broadside to the loop provides directivity. This is useful to null out a strong station when trying to receive a weaker station on an adjacent or sometimes even the same frequency.

Lower frequencies are tuned by switching in parallel capacitors while shorting some coil turns allows higher frequencies to be covered. A simpler version without switching or capacitors will cover 530 to 1300 kHz, that is, the main part of the broadcast band.

Obtaining parts

This is one of those rare projects where everything is readily obtainable. The tuning capacitor, ribbon cable, box and switches all came from Jaycar. A hardware store helped with the shade cloth used to encase the cable.

Construction

Instead of winding wire around a former, I used sixteen conductor ribbon cable with the ends soldered to form a coil. A two metre length of cable with fifteen conductors in use allows resonance at about 530 kHz with a normal tuning capacitor. The spare turn provides a connection for receivers with an antenna socket.

Getting the coil connections right is critical. I used rainbow coloured cable rather than plain grey to make this easier. Ignore the first (brown) wire as this is for the coupling loop.

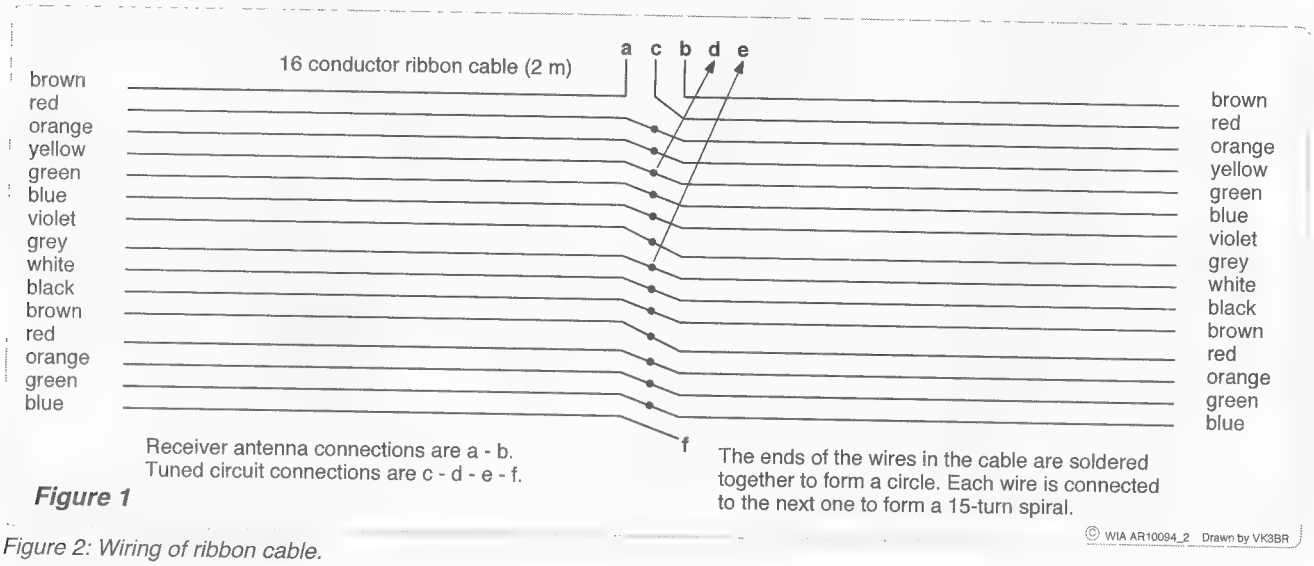


Figure 2: Wiring of ribbon cable.

Photo 1: Hand carried loop.

Starting with the second wire (red) solder the end of each wire to the opposite end of the next colour along until a 15-turn coil is formed. It helps to know the resistor colour code as the wires are thoughtfully coloured in numerical order.

Figures 1 and 2 provide more detail. Note there are two tapping points where another wire branches off to a switch; these are so that the loop can cover the top end of the broadcast band and lower HF frequencies. There are many close connections around the coil joint so insulation is critical to avoid shorted turns. Heat-shrink tubing could be used or insulation stripped from a thicker piece of wire.

The fixed capacitors and their switch are optional but desirable for tuning the 600 metre band and non-directional beacons down to 300 kHz. Additional capacitors can be switched (possibly with a rotary switch) for complete NDB band coverage down to 200 kHz. However the tuning range becomes narrower and a larger version of this antenna, possibly using four metres of cable, would provide better LF coverage.

Both switches look like ordinary two position toggle switches but are in fact three position, with no contacts connected when the switch is in the 'neutral' central position (SPDT Centre Off). This is the normal position for using the loop when tuning the bulk of the AM broadcast band. Switching either side adds less or more capacitance (or subtracts less or more inductance) to allow frequencies either side to be covered. Rotary switches could be substituted, but the compactness of the toggle switches suited the box used.

The tuning capacitor is the standard two-gang plastic type as used in transistor radios and generally available. Both gangs are wired in parallel (bridge the two outer terminals) to provide a maximum capacitance of approximately 220 pF. A larger variable capacitor, such as from a valve radio, will also work and changing the 220 pF capacitors to 330, 390 or 470 pF will extend the low frequency tuning range.

Adjustment and finish

First testing of the antenna should be done on the AM broadcast band with a portable receiver. Hold the loop open in the vertical plane (or drape over a plastic chair) and place the set inside the loop.

Photo 2: Loop control box.

Photo 3: Ironing the shadecloth.

There should be an increase in band noise when the loop's tuning capacitor is brought to resonance near the radio's dial frequency. It should be possible to cover the entire broadcast band this way. If not adjust the taps (if higher frequencies are not fully covered) or switch in 220 pF of parallel capacitance (if having problems at the bottom end).

Once satisfied that the taps are in the right spot the loop can be finished by wrapping the ribbon in a folded strip of shade cloth approximately 20 cm wide. Possible ways to secure the shadecloth include glue or sewing with coarse string. Having failed with the former and been impatient with the latter, I tried ironing together the edges of the shade cloth. The result was surprisingly successful, though too much heat causes the cloth to disintegrate. It's also a good idea to iron away from the ribbon cable. Finally glue the control box to the shadecloth near where the ribbon's wires emerge.

Conclusion

A very simple receiving loop for the medium frequencies has been described. Stations that are hardly audible without the loop are good strength with it. While not as sharp as a larger loop with more widely spaced windings, it still performs well and would be useful for situations where a full-size loop would not be taken.

Photo 4: Loop rolled out.

Photo 5: Loop with small receiver.

D-STAR QSO Party in 2011

Icom Inc. is pleased to inform you that the D-STAR QSO Party for 2011 will be held between **November 11th 0:00 to November 13th 24:00 (UTC).**

This event differs from the contest that has been held over the last few years. Instead of competing for numbers of contacted call signs, the goal this year is to encourage D-STAR operators to make contact with other operators in as many different countries as possible.

The more countries a user can contact during the time period, the more entries in the prize pool they will have. Icom Inc. has a total of 15 ID-31A D-STAR units available as prizes for the event.

Detailed information will be available on the following website in early October 2011: *http://www.icom.co.jp/d-starparty2011/*

DX-News & Views

John Bazley VK4OQ
john.bazley@bigpond.com

Well it has happened! Earlier this week (September 29) the solar flux hit 190, the first time since 2002 and 10 m was in good shape! If conditions do hold up until the end of November we should see a lot of activity there during the CQ CW contest. If you are looking to fill 'band spots' on 10 m this will be the time to do it.

We have a number of DXpeditions coming up, details below, but even the best laid plans sometimes 'fall apart' as, unfortunately, has happened with the **T32C** operation. This operation should still be active when you read this. The ship taking the majority of their gear, over five tons, broke down and had to be towed back to Fiji. They have taken additional rigs, as handheld luggage, antennas and a few small linears but the operation will be 'simpler' than originally planned but, I am sure, nevertheless successful.

Photo 1: Kevin VK0KEV, active from Macquarie Island through 2011, is due to go QRT in November.

Updating the ZK2V **Niue Island** expedition, October 21 to December 29, Keith GM4YXI/GM5X, will join Chris, GM3WOJ/ZL1CT/ZK2V for the first two weeks and Keith is hoping to get the callsign ZK2X. QSL ZK2X via N3SL. Chris will operate ZK2V in the CQWW CW contest at the end of November. The new ZK2V website has three new innovations. G4CLA has written software to give real-time logging, linking WinTest 4.8.0 in DXpedition mode to ClubLog and a real-time Google map showing the QTH of every station worked. IK8LOV is providing an interactive map showing the number of stations worked in each DXCC entity. Refer *www.zk2v.com*

Bill VK4FW has advised a change of plans for the C21A DXpedition to **Nauru Island**, which was expected to take place from mid-November to early December. Due to flight uncertainties from Fiji to Nauru the team has decided to change destination. They are now pushing back the C21A DXpedition to 2012; however they have 'secured accommodation, licence and flights' to **Tuvalu** and will be QRV as T2T from November 10 to December 6. Unfortunately, due to major work commitments, Art NJ7N has been forced to pull out. So the team now will be K4ZLE, NL8F, VK4AN, VK4NEF, VK4FW and W5SL. The team has a new website at *http://www.t2t.pacific-dxers.com/* which has all the updates. The team is seeking donations, which can be made via PayPal to *dxpedition@westnet.com.au*

Rob GM3YTS and Gavin GM0GAV have planned a CW only DXpedition to **Malawi**. They will be active as 7Q7GM from October 31 to November 13 with an emphasis on the low bands, specifically 80 and 160 metres. Plans are to upload their logs to a log search during the DXpedition and then LoTW upon their return home. QSL via GM4FDM.

Twelve operators (namely OK1DIX, OK1DO, OK1DSZ, OK1FFU, OK1NU, OK1RI, OK1RK, OK5MM, OK8WW/OM2TW, OM2IB, OM5AW and OM6NM) will be active from **The Gambia**, from November 20 to 29. They will participate in the CQWW DX CW (26-27 November) contest as C5A (Multi-Multi). They will be QRV on 160 through to 10 metres with six stations. QSL via OM2FY, direct or bureau. Logsearch and further information can be found at *www.om0c.com*

This is the 23rd straight year for the VooDoo Contest Group's DXpeditions. This year they go to **Liberia** for the CQWW CW contest in November. They will be EL2A, Multi-Multi, from a QTH just south of Monrovia, the capital. The group, with their personal callsigns, will be active from November 21. Ned AA7A - EL2NS, Roger G3SXW - EL2A, Fred G4BWP - EL2WP (QSL via G5LP), Mike KC7V - EL2MF, Lee KY7M - EL2LF and Bud N7CW - EL2CW. QSL via their home calls except for EL2WP. Roger G3SXW has said that 'LoTW uploads will be fast!' He also thanks the Liberian Radio Amateur Association for their wonderful support.

Trevor VK0TH is now QRV from **Macquarie Island**. His gear is a Yaesu FT-897 running 100 watts into a five band vertical and 40 m dipole. He is active 80-6 m. No word yet on his length of stay on VK0. He has been reported on PSK31 on 21.070 MHz on Saturdays around 0230 Z. QSL direct only, to JE1LET. Kevin VK0KEV is still on Macquarie Island and currently is scheduled to depart the island in November, after a 13 month stay.

Susan W7KFI is once again saying she will be going to **Johnston Island** (KH3). Apparently she plans to set sail aboard her sailboat in late November or early December of this year. Stan KH6CG says she will be running 100 watts into a 13.1 m (43 foot) vertical on SSB and CW, as KH3/W7KFI. QSL via KH6CG.

Gab SU/HA3JB has renewed his licence to operate in **Egypt** and plans to be on for the CQWW DX CW contest. QSL to home call.

W0MU, N1NK and G0VDJ are getting ready for their J6 **St. Lucia** trip in November. The licences have been issued. The operation is planned from November 21 to December 1, emphasizing the CQWW CW contest. They will have a pair of Elecraft K3 rigs to KPA-500 amps and a variety of antennas. *http://w0mu.com/DX/*

Art VP2V/N3DXX will be on **Virgin Gorda** November 23-30, focusing on 160 and the CQWW CW contest, November 26-27. He will be single op all band. QSL to AA7V.

8Q7EJ in the **Maldives**, by Jim G3VDB, will be at the Vilamendhoo Island Resort October 31-November 13. He will be holiday style, mostly on 20 m, CW, SSB, PSK31 and RTTY. QSL to his home callsign. The 8Q7EJ logs from 2009 and 2010 are now on ClubLog, *http://www.clublog.org/logsearch/8Q7EJ*

ZF1A will be the call used by K6AM, K5WA and AC6T for the CQWW CW contest November 26-27. They will be multi-single. QSL direct, bureau or LoTW to K6AM.

Mike VP8DMH plans to be stationed at the Halley Station, **Antarctica** from the end of December 2011 through the beginning of March 2012. QSL via M0PRL.

J68HZ, **St. Lucia**, is scheduled for November 19-December 3 by K9HZ operating from Castries. Especially look for him near 7.155 MHz and 14.155 MHz between 1600-2400 Z daily. QSL via K9HZ.

PJ7I (the callsign applied for) **Sint Maarten**, is due from November 24-28. Operator Masayuki Inoue JN3NFQ/K1GI will have an FT-450 with 500 watt amplifier. He will have a quarter-wave vertical for 80 and 40, hex beam for 20 to 10. The operation will be 80-6 m SSB, CW and digital. QSL via JG2BRI. *www.qsl.net/pj7i*

After a month and a half Robert S53R is back in Khartoum, **Sudan** and QRV as ST2AR. Robert is one of the best operators and can operate on 1.8 through 50 MHz. For more information about ST2AR check out his QRZ.com listing at *http://www.qrz.com/db/st2ar* QSL direct only to S53R.

Taiwanese amateur radio operators will be putting on a multi-op as **BV100** in the upcoming CQ World Wide CW DX contest. The operators will be BM2AAV, BV2DD, BV2KI, BV2KS, BV2NT, BX2AB, BX4AF and BX4AN. QSL via BV2KI.

6V6V is the **Senegal** callsign for N1NSB when he is there for the CQWW CW event November 26-27. He plans to be single-operator all-band. QSL to his home call.

5X1NH will be on from **Uganda** starting November 23, for three weeks. Nick G3RWF is taking his new KPA 500 amplifier, hoping to make a dent in the low bands, he says. QSL to G3RWF.

9M6NA on **Labuan Island** will be in the CQWW DX CW contest November 26-27 with JE1JKL operating, single operator all band. QSL to his homecall.

TO7A on **Martinique** will be in the CQWW CW contest November 26-27. UT5UGR will be at the controls, single op all band high power. QSL to his home call.

6Y3M in **Jamaica** will be in the CQWW CW contest November 26-27, multi-single. Operating will be Lajos VE3NE and Gyorgy VE3NZ. QSL via VE3NE.

Paul VE3TA and Nick VE3EY will be operating as TO3A from **St. Barthelemy** during the CQ World Wide CW DX contest, as they have now secured the licence through the French ministry. This will be a multi-single effort. The two will be on St. Barts from November 22 to 29. Outside the contest they will be QRV as FJ/VE3TA and FJ/VE3EY. QSL TO3A and FJ/VE3EY via VE3EY and FJ/VE3TA via VE3TA.

DK9PY plans to be on **Guadeloupe** (FG) from November 6 to 25. Activity is planned for 3.5 through 28 MHz, on CW. Listen 15 kHz up from the bottom of the band.

Special thanks to the authors of **The Daily DX (W3UR), 425 DX News (I1JQJ)** and **QRZ.DX** for information appearing in this month's DX News & Views and photographs from JE1LET and G3SXW. For interested readers you can obtain from W3UR a free two-week trial of The Daily DX from *www.dailydx.com/trial.htm*

Photo 2: The VooDoo Contest Group that operated as 9L5VT in the 2010 CQWW CW contest from Freetown, Sierra Leone. L to R: Roger G3SXW, Zbig 9L1BTB, Ned AA7A, Fred G4BWP and Bud N7CW.

Bits and Bobs: How amateur radio enhances a marriage

Rananda Rich VK2FRAR, with technical support from Alex Taverner VK2RZ

Marriage is not only about sharing and being together. It is also about giving each other space to develop your own interests and talents knowing that you have the support of your spouse. So on one level, when my husband explained we needed another trip to the local hardware store, oh and could we stop at the toy store too, I was happy to indulge him but not to delve any further into what was going on behind his closed study door. This time he was after a metal retracting tape measure and a 'slinky' that walks its metal coils down stairs.

Of course, what he wanted to do was build another couple of antennas, this time a compact radio direction finding antenna and a twenty metre band dipole. I have to admire my husband's tenacity. At the time we lived in an apartment block built of steel reinforced concrete which made picking up even commercial radio stations difficult at the best of times. Consequently his triumphs with antennas had been hit and miss though the portable contraptions have been used with varying degrees of success all over the higher ground of New South Wales.

Since renewing his interest in amateur radio after a twenty year break from it, our home has gradually accumulated an increasing amount of what can only be described as 'bits and bobs'. Apparently it is possible to make working antennas out of things that just happen to be lying around the place. What is really happening is that when he buys a part for his latest project it comes as a pack of two or four and all of a sudden 'spares' start to accumulate.

Nevertheless while I still was not a big fan of the increasing clutter around the place, I did start to become interested in the reach of amateur radio. While on car journeys we tracked our passage by listening to the Morse idents from the repeaters, and when the wind was blowing in the right direction (so to speak) I could hear conversations about what was for dinner over in Broken Hill, or hear the logistics discussed of a local fair in Wagga Wagga. It felt illicit initially to be able to hear these conversations, like I was eavesdropping. Yet I felt drawn to these real but distant lives taking place remotely all around me. I realized that I was intrigued in being able to be part of this larger Australian community. My husband had to explain to me that these are not like private phone calls. The amateur radio bandwidths are there to share. In the interest of research and experimentation actually keeping a log of transmission details, particularly those that are being picked up over longer distances, can provide useful information and increase understanding of propagation.

Later that year we took our annual holiday up on the northern New South Wales coast and we packed the normal stuff: tent, tennis rackets, boogie boards, clothes, esky etc. But it seemed that the heaviest and bulkiest items were all the different bits of radio gear. At this stage I was still relatively disinterested in amateur radio. Actually, I will share a secret with you. I loved that my husband was into this radio stuff. It gave me hours off each day to read novels, lie in the sun, and relax. All this was completely guilt free while he twiddled and fiddled with his knobs and listened avidly to the static.

Photo 1: Alex VK2RZ 'listening avidly to the static'.

But a funny thing happened while we were on our holiday. One week we stopped at a beautiful caravan park which was situated beneath a brilliant leafy green canopy. The wallabies grazed between the pitched tents in the evenings, the sulphur crested cockatoos socialised on the soft grass in the mornings and there was the sound of surf in the background from the beach that was only a few hundred metres away. My husband had noticed something far more exciting, however. The trees! He searched for and selected an appropriate rock and then threw this over the lowest of the high branches. It was attached to string which in turn was attached to an end fed antenna. At this stage I knew that I had secured at least an hour of peace and quiet as he plugged the radio into the car battery.

What was interesting though was that there was more than just communication via radio. Referring back to his log book of those few days, I can see that he spoke to New Zealand and could hear Russian and Canadian stations. But in addition he drew an audience from the surrounding camp sites. Initially I think it was out of concern for the contraption and wires that he had rigged up overhead. 'What is this?' 'Is it legal?' 'Is it safe?' And then these transformed into more congenial questions such as 'Who are you talking to?' 'How does that work?' All of a sudden my husband knew everyone by name, was having beers with them and I was the one with no mates sitting with my head stuck in a book not interacting with my surroundings at all.

From feeling magnanimous about giving my husband space to develop his 'nerdy' hobby, I was somewhat humbled by the way my husband has used his hobby to make friends, have fun, and be part of a bigger community. And it has been enough to motivate me to complete my Foundation Licence...

Contests

Phil Smeaton VK4BAA

Contest Calendar for November 2011 – January 2012

October	**1/2**	**Oceania DX Contest**	**SSB**
	8/9	**Oceania DX Contest**	**CW**
	22/23	ARRL International EME Competition	CW/SSB
	29/30	**CQWW DX Contest**	**SSB**
	29/30	CQWW SWL Challenge	SSB
November	12/13	Japan International DX Contest	SSB
	12/13	Worked All Europe DX Contest	RTTY
	19/20	ARRL International EME Contest	All
	26/27	**Spring VHF/UHF Field Day**	**CW / SSB / FM**
	26/27	**CQWW DX Contest**	**CW**
	26/27	CQWW SWL Challenge	CW
December	2/4	ARRL 160 m Contest	CW
	4	RTTY Melee	RTTY
	10/11	ARRL 10 m Contest	CW/SSB
	17	OK DX RTTY Contest	RTTY
Jan 2012		**Ross Hull Memorial VHF Contest (VHF/UHF)**	**CW / SSB / FM**

Welcome to this month's Contest Column.

CQWW CW 2010 results

A very pleasing list of VK stations entering the contest in 2010. VKCC managed to submit three teams in the contest, consisting of:

VKCC Suckers (Long Path) comprising VK2PN, VK4AN, VK4SN and VK6DXI, totaling 890,951points; **VKCC Suckers (Short Path)** comprisoing VK2BJ, VK4IU (VK4EMM), VK6AA (VK2IA) and VK6LW, totaling 9,301,370 points and; **VKCC Dream Team**: PAØMIR, VK2GR and VK3TDX, totaling 1,568,404 points.

VK6AA A 5,705,784 (Op: **VK2IA**, using the station of the NCRG); **VK2GR** 601,506; **VK2PN** 504,804; **VK7GN** 50,986; **VK6LW** 998,200; **VK3TDX** 430,164; **VK4BUI** 156,279; **VK4IU** 1,976,728 (Op: **VK4EMM**); **VK2BJ** 620,658; **VK6HG** 251,100; **VK3FM** 99,110; **VK4EJ** 56,064; **VK4TT** 36,378; **VK4VDX** 20,097; **VK3BYR** 12,925 (O: **MØRYB**); **VK4TI** 4,080; **VK4CC** 1,558; **VK2AYD** 38,772; **VK4OQ** 203,895; **VK4TGL** 242; **VK2DX** 20,272; **VK3GK** 13,851; **VK6DXI** 9,968; **VK4FJ** 103,806; **VK4AN** 217,889; **VK4SN** 158,286; **VK1CC** 5,054,836.

Col VK4CC commented that he had only been learning the Morse code for six months and this was his first CW contest, enjoyed it immensely and looked forward to the next one. By the time you read this Col, you would hopefully have participated in another one!

WAE contest 2011

Steve VK3TDX was out in force for this contest. Steve found it to be a very frustrating but still satisfying weekend. The solar flare caused major disruption to propagation blacking out much of the weekend propagation to EU but there were still some very good openings that made this interesting and challenging. From VK3 Steve had an excellent late afternoon 20 metre long path and after midnight a short path opening that helped him push his score as high as he could get it. John VK4CT did not have a good 20 metre opening Sunday night but from Steve's QTH there was about three hours of pipeline from one to 4 am that allowed him to run for about 300 contacts. Very strange but it was good fun during the openings. Only a modest 15 m opening on Sunday to EU and 10 m never opened at all. 40 m was also a bit strange – Saturday night it performed as normal but on Sunday it was reportedly dead and Steve heard almost no stations anywhere working into EU from JA, Asia or ZL. Steve managed to bag 654 QSOs for a claimed score of 322,056.

Vlad VK2IM was on the bands and operated for a few hours in the contest, to grab 648 Qs for a claimed score of 103,032 points. John VK4CT (VK4EMM) was also active, managing to make most of his score on the first day prior to the solar storm. The solar blackout arrived on the second day, but John stayed up all night to work one QSO. Imagine staying up from 1450Z to work one station. That is what I call frustrating. John could be forgiven for thinking that Steve had some sort of celestial arrangement taking place, as the solar storm was very selective. During the same period as John's solar blackout to Europe, Steve was working pile-ups on 20 m and 40 m.

CQWW DX RTTY contest 2011

The SFI stayed around 170 and the K index never got over three the whole weekend so VK stations finally had a chance to operate a major WW contest with full open propagation. For the vast majority of the contest, there was at least one or more bands open to DX and at sunrise both days all five bands were wide open at once to southern VK. It was great to be spoilt for choice and have to decide which band to operate in such conditions. It was tempting to indulge in band changing to up the multiplier tally, but the scoring systems means that if QSOs and multipliers are coming on the band you are on, it is just as good to stay put and let the points accumulate.

Steve VK3TDX took full advantage of the conditions to amass around 1500 QSOs - which is an impressive tally in RTTY as the exchange speed is probably less than half that of CW or SSB.

Oceania SSB contest 2011

As I sit writing this wee ditty, the sounds of the Oceania SSB contest are still in my ears. A mixed bag of fortune this year, with HF doing rather nicely but LF deciding that sustained decent propagation was

Photo 1: VK4SN's humble abode during the Oceania contest.

not going to happen. A number of stations in VK4 reported poor LF conditions and reports from ZL seem to mirror this observation.

Did you suffer from wind?

Alan VK4SN certainly did. His camp site at VK4KW can be seen in Photo 1, cowering after being blown for hours on end. All the little piggies had long since run away. The wind bursts were very strong indeed and caused many hours of wind static on LF – just to add to the woes on 80 m and 40 m.

The California QSO party can often cause problems for us in the Pacific as the W6s point east blocking OC ability to work mainland USA. Some US stations would not work anyone other than CA stations, but took longer to inform the unwanted caller as such than it would have taken to give away some points. Such is life. The California QSO party created a bit of havoc but it was not the biggest issue for participants. On Sunday the radio went dead - nothing on any of the HF bands. VK7 up to VK4 suffered, as did stations in ZL and across to VK6, causing many to check their radios and even try a second one in case of failure. Thankfully it did not last and we got to work stations again. VK7ZX was active for the first time in the Multi/Single category, operated by VK7ZE and VK7NET. 1783 QSOs ensued, for a claimed score of 4,096,432. Not bad at all for a first time out!

Steve VK3TDX was again active, netting 613 QSOs for a claimed score of 684,690 and Peter VK8HPB was also on the bands and generated a claimed score of 174,609 for his efforts. Catherine VK4GH was also competing well, generating a claimed score of 1,355,190 but also commenting that this was the first contest where she was actually busy most of the time and did not have time to play cards etc like in most other contests!!

Andrew VK4NM and Peter VK4LAT set up their usual M/S station but with a number of improvements this year. Their score was helped along by the 10 m antenna that Peter made prior to the contest - an eight element Yagi on a 19.5 metre boom. The antenna was rotated by two bits of rope located at either end of the boom. I dare say that it wobbled about in the breeze! The lads logged 1943 Qs for a claimed score of 5,438,840.

Vlad VK2IM reported poor weather also – but more than just a lively breeze. Vlad suffered from rain and hail during a nasty storm. Looking at the radar, Vlad saw one storm cell circulating at his QTH about a dozen times over the weekend. It was probably Steve up to his celestial tricks again! Vlad also reports some flash flooding as well. Constant QRN crashes on low bands with almost constant static rain static on the high bands, makes for hard work, but Vlad persevered for 900 QSOs and a claimed score of 1,647,716.

The HQ station of the NCRG was manned for the weekend by Keith VK6RK as a solo effort on 10 m as the guys could not persuade enough members to participate. NCRG usually go to Muresk for the Oceania contest and have a ball with a strong emphasis on social activities as well as the contest itself, but the trip was called off this year. It is a shame to see such a superb station only partially utilised but this type of problem is unfortunately quite prevalent. Keith netted just over 600 QSOs for a claimed score of 671,232 points. That is good going Keith, for a single op effort!

VK4KW operated as M/2 and had some fun on the bands – except for the wind of course. The team worked hard to grab just over 3100 QSOs for a claimed score of 12,900,000 points. Photo 2 shows John VK4EMM contending with the EU pile up during the latter part of the contest.

T32C entered as M/M and amassed just over 50,000,000 points as a claimed score – which is surely a record which will take quite some beating – if ever! A superb effort!

The Oceania contest improves year on year and is well worth the effort to get on the bands as we are the target for the rest of the world for QSOs. CQWW contests tend to be more hectic and more stations on the bands, but being the centre of attention is nice every now and then!

If you have any contest related material for inclusion within the column, topics that you would like covered or even some experiences and pictures you would like to share, then please feel free to get in touch via *vk4baa@wia.org.au* See you on the bands.

73 de Phil VK4BAA

Photo 2: John VK4EMM at VK4KW during the Oceania SSB Contest.

2011 Remembrance Day Contest Results

Peter Harding VK4OD

I received a total of 282 logs compared to 358 last year, with one log each for the HF and VHF Receiving section, one log in the WWII Equipment Single Open.

The overall points for 2011 totalled 41,495 points compared to the 2010 total of 41,185.

Thankfully this year, 272 of the logs were created electronically, the other remainder that were posted, were either hand written or on the pre-designed forms that I made available. This made my task a lot easier and enabled a quick final result being made.

Although many stations made contact with some of the ZL stations this year, we had only one log in from P29 and from the "Land of the Long White Cloud" in the HF category we received three logs.

It is no surprise that VK6 once again will get their name engraved on the RD Trophy as the Winning State for 2011. Once again I must thank the amateurs in VK5 who really improved the points from last year.

Well done to all those who took the time and effort to enter the contest and also posted or emailed in their logs.

Above is a table of the breakdown of Logs and points by State for 2011 vs 2010.

Before the next RD rolls around I will have posted to those operators who hand wrote their logs several copies of a computer generated log sheet and cover sheet, as some of the hand written sheets took a fair amount of deciphering (but we got there).

By the time you read this in *AR*, all the Certificates will have been sent out, to all the first, second and third place getters.

Should any questions arise from this year's contest, please email them to Peter Harding, c/o *vk4od@wia.org.au* and I will do my best to answer your query.

Until next year.

Peter Harding VK4OD

State	Logs 2011	Points 2011	Logs 2010	Points 2010
ACT	11	890	23	2467
NSW	32	5174	42	5385
VIC/0	43	4585	56	3254
QLD	41	5222	54	4715
SA/NT	49	4417	43	8126
WA	77	15,668	105	12,410
TAS	25	4772	34	4754
PNG	1	104	0	0
ZL	3	663	1	74
Totals	**282**	**41,495**	**358**	**41,185**

HF WWII Single Open 2-1-1-3

Call Sign	Score
VK5WT	16

HF Multi Open 2-0-2-3

Call Sign	Score
VK2AWA	752
VK4WIS	458
VK3YVG	161
P29CW	104

HF Multi Phone 2-0-2-1

Call Sign	Score
VK7ZE	1284
VK2AWX/P	821
VK4HH	679
VK2TS	321
VK3BJA	249
VK3WI	178
VK5GRC	174
VK2AOJ	112
VK6SH	81
VK2AFY	76
VK8DA	37
VK5NI	26

HF Single CW 2-0-1-2

Call Sign	Score
VK7OO	299
VK3QB	208
VK4WM	160
VK2BHO	142
VK5UM	102
VK2KJJ	80
VK2BJT	64
VK5HO	60
VK3TX	58
VK4ZW	46
VK5FKAD	32
VK6AFW	28
VK2RJ	20
VK2VFX/AOJ	16

HF Single Open 2-0-1-3

Call Sign	Score
VK4SN	562
VK5ATU	382
VK3HJ	369
VK7GN/2	353
VK2UH	254
VK3YE	122
VK5NE	50
VK6TWO	44
VK2WL	18

HF Single Phone 2-0-1-1

Call Sign	Score
VK6IR	1098
VK4QH	657
VK5PAS	503
ZL2U	489
VK3LDR	464
VK2KF	410
VK6NS	375
VK2BGL	335
VK3AVV	316
VK2NBR	314
VK2NRB	314
VK7TW	312
VK5CB	300
VK4ATH	297
VK4KRX	285
VK1HW	285
VK4ADC	257
VK5KX	250
VK1LW	220
VK7HW	214
VK3WZ	207
VK2ACC	196
VK4MIT	180
VK6ADI	176
VK3VCL	171
VK2HBG	162
VK4FATT	161
VK3AHY	159
VK7VKT	156
VK5DJ	151
VK4AMG	142
VK2EJW	140
VK3ASU	140
VK2YY	138
VK5ZQV	136
VK4JRO	128
VK5ZT	128
VK3TCX	119
VK7BEN	118
VK1MAT	117
VK3FT	117
VK6ED	116
VK5MTM	113
VK4BAY	113
VK3AMW	111
VK6CSW	110
VK5ZD	107
VK4GQ	103
VK3MRG	101
VK6DT	100
VK5KBJ	97
ZL4HD	94
VK7OO	89
VK7ZGK	87
VK4GLC	86
VK2XDL	82
VK3CO	81
ZL50GH	80
VK7KPC	76
VK5UV	75
VK6LAW	70
VK3SIM	69
VK5TW	67
VK2LEE	66
VK1EY	65
VK5LJ	64

VK4MON	63
VK5FCJM	63
VK5FCJM	63
VK2KZ	63
VK3VT	62
VK4FHYH	61
VK3MZ	59
VK3FZRB	58
VK2FERM	57
VK1DW	56
VK7KC	53
VK4FLR	50
VK1XYZ	50
VK3FAAR	50
VK3CAY	50
VK3YX	50
VK5UE	50
VK6SO	50
VK6FDX	47
VK4BL	46
VK4MAX	46
VK6JP	45
VK3KTM	42
VK1FM	41
VK7HK	41
VK4FR	36
VK2EI	36
VK3ZPF	35
VK7JGD	35
VK5AIM	34
VK4GH/P	34
VK7RM	33
VK1ZHC	33
VK5LSB	32
VK5LSB	32
VK6AH	32
VK4SR	31
VK2ACD	30
VK6AXB	30
VK2ARE	28
VK2RL	28
VK2VE	26
VK4OD	25
VK6HX	25
VK6MAB	25
VK2NR	25
VK6HX	25
VK6AR	25
VK4AA	24
VK3DY	24
VK2AOJ	24
VK2FY	24
VK3JK	23
VK7HDM	23
VK6ZRW	22
VK6CG	22
VK4TE	22
VK6HV	21
VK5LZ/5	20
VK4PQ	20
VK4HSW	18
VK6YOY	14
VK6YOY	14
VK1CM	14
VK3KYF	13
VK5MK	10
VK4ZBV	10
VK5HCF	9
VK5KC	7
VK6HDX	7
VK3JWT	6
VK3SF	6
VK3HSR	3
VK6FLMJ	1

HF Single CW 2-0-1-2

Call Sign	Score
VK7OO	299
VK3QB	208
VK4WM	160
VK2BHO	142
VK5UM	102
VK2KJJ	80
VK2BJT	64
VK5HO	60
VK3TX	58
VK4ZW	46
VK5FKAD	32
VK6AFW	28
VK2RJ	20
VK2VFX/AOJ	16

HF Single RX 2-0-1-4

Call Sign	Score
VK6ABM	57

VHF Multi Open 1-0-2-3

Call Sign	Score
VK6AHR	377

VHF Multi Phone 1-0-2-1

Call Sign	Score
VK3BJA	212
VK4WIS	147
VK5GRC	62
VK3YVG	47
VK5NI	16

VHF Single Open 1-0-1-3

Call Sign	Score
VK6TWO	802
VK5NE	160
VK5SE	66
VK5AIM	47

VHF Single Phone 1-0-1-1

Call Sign	Score
VK5NE	799
VK6BDO	691
VK6PIG	684
VK5ZT	671 ±
VK6NAH	660
VK5AKH	535
VK6USB	517
VK5VCO	460
VK6KHZ	460
VK6FMON	435
VK5NI	387
VK5HZ	375
VK6KYF	354
VK6GO	354
VK6FIVE	338
VK6SAA	338
VK6SCS	337
VK6LZ	311
VK6CSW	302
VK7OTC	280
VK6GG	268
VK6KTV	265
VK6AXB	265
VK6NU	245
VK5ZD	242
VK5KBJ	240
VK6ST	237
VK6FDX	230
VK7HDM	224
VK6YS	220
VK6YD	211
VK6HAD	209
VK6JP	202
VK5AR/M	201
VK6MM	184
VK6CLL	184
VK6GD	178
VK7OO	177
VK5FXYL	158
VK6OTN	134
VK6WJ	134
VK5KLD	134
VK6HDX	131
VK3JK	130
VK6WIA	127
VK6KMC	117
VK5FSKS	106
VK7RM	103
VK6CN	101
VK6ZKO	100
VK4ADC	83
VK5APA	76
VK6ZLZ	75
VK5LD	73
VK6AR	69
VK7ZGK	65
VK6AB	62
VK6OE	59
VK4OE	59
VK6AAL	58
VK6HRC	58
VK4ZA	54
VK6KG	53
VK4ZW	50
VK6ZSB	50
VK6AN	42
VK7JGD	40
VK6YF	39
VK1DW	38
VK7PAH	36
VK5ZKK	35
VK3JWT	35
VK4AR	31
VK6ZMS	27
VK5RV	26
VK6TS	26
VK6FJA	23
VK7VKV	21
VK4RY	15
VK7HW	13
VK7VH	11
VK4GLC	8
VK3KTM	6
VK2EI	6
VK4ION	6
VK2YW	5
VK1EY	4
VK5CB	4
VK4UD	4
VK4HJE	4
VK2ZCW	3
VK4BW	3

VHF Single RX 1-0-1-4

Call Sign	Score
VK5FPAW	51

WIRELESS INSTITUTE OF AUSTRALIA

WIA Annual Conference

Mildura, 25 – 27 May, 2012

Register online at http://www.wia.org.au/

The 31st ALARA contest

Lesley Smit VK5LOL – ALARA contest manager

The ALARA contest is always held on the last full weekend of August each year. This year it was held on the 27th and 28th August.

Congratulations to those who did well in the ALARA contest in spite of the poor participation rate by YLs. I am interested in receiving feedback re what we can do to encourage YLs to get on the air. I'm not sure that a contest is the way to go. YLs generally prefer to chat than contest!

Catherine VK4GH is the overall winner with 1307 points. This was a sterling effort. Catherine did well on 20 metres, having contacts with 42 different countries. It was a great pity there were no YLs amongst those contacts!

Leonie VK2FHRK is the top Foundation licensee, with 344 points.

I am pleased to award Mavis VK3KS the top CW certificate. Mavis has been contesting since the earliest days of the contest.

Sadly there were no non-ALARA members on air to win the free membership to ALARA for a year. This year you would have only needed one contact plus submitting your log to me to win that membership!

Gerald VK2HBG is the top VK OM, with 269 points.

A great big thank you is forwarded to the OMs who persisted in spite of the lack of YLs. Let's see if we can all make a better effort next year.

In summary, there were nine ALARA members, no non-member YLs, and ten OMs that entered logs.

Scores

Catherine VK4GH	1307	Top overall, Top Phone, Top VK4 ALARA member
Pam VK4PTO	572	
Leonie VK2FHRK	344	Top Foundation Licensee, Top VK2 ALARA member
Gerald VK2HBG	269	Top VK OM, Top VK2 OM
Mike VK3AVV	210	Top VK3 OM
Phillip ZL2U	205	Top ZL OM
Jenny VK3WQ	196	Top VK3 ALARA member
Paul VK5PAS	165	Top VK5 OM
Bill ZL2AYZ	150	
Lesley VK5LOL	135	Check log
Dot VK2DB	123	
Marilyn VK3DMS	98	
Shirley VK5YL	86	Top VK5 ALARA member
Paul VK2HV	65	
Chris VK2ACD	50	
Matthew VK2ACL	25	
Tom YL2PP	9	Top European OM
Mavis VK3KS	6	Top VK YL CW
Eric SM1TDE	5	

Correction: Short unloaded whip antennas

Correction and addendum to the article *'An exquisite situation... on short unloaded whip antennas and the effect of shunt capacitance at their base'* published in the October, 2011 edition of *Amateur Radio* magazine.

We are thankful to Dr Paul Edwards VK7ZAS for pointing out that there was an error and lack of clarity in the article:

In the paragraph starting: 2. RR is the 'radiation resistance'... The equation given for the power radiated from any antenna should be $P = I^2 \times RR$ not $P = I^2 / RR$

1. The radiation resistance of any antenna is fixed by its height and operating wavelength and cannot be changed by external components. Therefore Figure 3 is incorrect as it stands and a number of changes should be made to clarify the situations:
   a) The vertical axis should be relabelled 'effective radiation resistance' as this is the value of the transformed radiation resistance that is seen by the transmitter. The adjacent paragraph starting 'Doing some circuit analysis...' states that it is the '...radiation resistance seen by the transmitter...' but this is not clear from Figure 3.
   b) The title of Figure 3 should read 'Effect of shunt C on effective RR & X of 2.7 m whip @ 3.55 MHz'.

Dale Hughes VK1DSH and Andrew Davis VK1DA/VK2UH

Silent Key

David Sidney Thompson ex VK2BDT

It is with great sadness I report the passing of David Sidney Thompson. David passed away on the eve of his 92nd birthday, on 18 July, 2011.

David Thompson had an extraordinary life, and was involved in many facets ranging from radio to race horses, and farming to a diverse range of community activities. He was born in Sydney on 19 July, 1919, and lived his early life in Strathfield. After leaving school David worked for a large trustee company and began his studies in accountancy. He was also serving in the Militia (Army Reserves), before enlisting in the Australian Army on 26 June, 1940 at Rushcutters Bay. David was a corporal in B Company of the 2/20th Battalion in the 22nd Brigade of the 8th Division AIF.

During the course of his time in the military David was wounded in Singapore, and spent more than a year as a prisoner-of-war working on the Thai-Burma railway. He was also to view first-hand the aftermath of the atom bomb attack on Nagasaki.

He was discharged on 5 March, 1946 and spent time working on a number of properties before managing his brothers farm at Bigga.

In 1958, David was granted a Soldier Settlers block off Fullerton Station at Golspie. The family packed up and moved there, firstly living in a tent while a fibro shed was built to live in, and eventually a cottage. While at Golspie in the late 60's he renewed his childhood passion for radios, and electronics. The location at Golspie was of a high altitude, and perfect for HF and VHF radio. He had a wonderful antenna farm. By 1971 he had obtained his amateur radio licence, VK2BDT, which he held until recently. He remained farming at Golspie until 1973, and then the family moved into Goulburn.

David also bought a property, 'Marama', and ran it from town.

He was the VK2 President, and then in 1978 David became the first President of the newly formed Goulburn Amateur Radio Society, and was also heavily involved in the late 1990's when the club merged with another local club to become the Goulburn and Southern Highlands Radio Society.

By 2008, with his health failing, David moved to a retirement village in Goulburn. He sold off much of his equipment when he left his farm.

He was one of those people who are 'life's characters'. He was a true friend, and definitely will be missed by all who knew him, but in particular by the members of the Goulburn, and Southern Highlands Radio Society. Men like David Thompson are a vanishing breed. He was a legend in his own lifetime.

He is survived by his wife Pat, sons Stewart and Henry and their families, which include five grandchildren.

Submitted by Ian Jeffrey VK2IJ.

Yarra Valley Amateur Radio Group Inc.
www.yvarg.org.au PO Box 346 Healesville Vic. 3777

Sales
of pre-loved Ham equipment components & computer gear

VK3YVG's
Hamfest
SALE

Free tea and coffee
Light refreshments available
Hire of tables $15 each
Ample parking $5 entry
Open to traders at 8:30 am

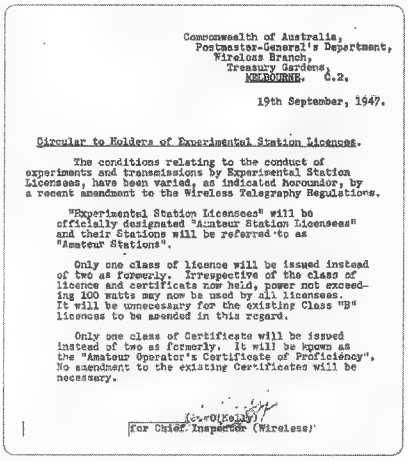
Sunday 6 November 2011
10 am to 2 pm at the new venue
Garry Cooper Pavillion,16 Anzac Avenue, Yarra Glen Melways 274 K1

Call in on VK3RYV Repeater 146.725 MHz

For booking of tables and further information contact
Gavin VK3GH on 5968 8482 or Brian VK3ABJ on kan00082@bigpond.net.au

A history of the Amateur Operators Certificate and the Morse code requirement

Lloyd Butler VK5BR



Commonwealth of Australia,
Postmaster-General's Department,
Wireless Branch,
Treasury Gardens,
MELBOURNE. C.2.

19th September, 1947.

Circular to Holders of Experimental Station Licences.

The conditions relating to the conduct of experiments and transmissions by Experimental Station Licensees, have been varied, as indicated hereunder, by a recent amendment to the Wireless Telegraphy Regulations.

"Experimental Station Licensees" will be officially designated "Amateur Station Licensees" and their Stations will be referred to as "Amateur Stations".

Only one class of licence will be issued instead of two as formerly. Irrespective of the class of licence and certificate now held, power not exceeding 100 watts may now be used by all licensees. It will be unnecessary for the existing Class "B" licences to be amended in this regard.

Only one class of Certificate will be issued instead of two as formerly. It will be known as the "Amateur Operator's Certificate of Proficiency". No amendment to the existing Certificates will be necessary.

for Chief Inspector (Wireless)

Figure 1: The 1947 licence changes. (From the records held by the WIA Historian).

The Amateur Operators Certificate of Proficiency and its qualification for Morse code has seen some changes since it was first introduced in 1924. I thought I would track down changes, such as Morse speed, which have occurred over the years

The issue of the Amateur Operators Certificate of Proficiency (AOCP) is inter weaved with the issue of licences to operate amateur stations. The operating conditions of licences issued have depended on the breadth of qualification in the Certificate and conversely, the curriculum variation for Certificates has varied to suit the variations in licence conditions. Also the encoding of amateur call signs issued has been related to the type of licence issued and hence the type of operating certificate held.

This article is about the amateur certificate and where relevant, mention is made of its connection with the licence and in some cases the call sign. To include the changes in licence conditions and call signs before the introduction of the AOCP would be a much larger task and this has not been addressed.

Experimenting with Wireless Communication goes back to the last century with the control of experimental licences to transmit following a variable path. The Australian Government enacted the Wireless Telegraphy Act (October 1905) which placed the control of wireless under the Postmaster Generals' Department (PMG). This allowed the PMG to issue licences for amateur experimentation.

All wireless experiments ceased in August 1914 because of World War 1 and were not resumed until after June 1919.

The Navy took over full control of the airwaves in November 1916 and this continued until September 1920 when it was handed over to the Prime Minister's Department. This remained until 1922 when the PMG took over control of licensing functions. The PMG introduced the first Amateur Operator's Certificate of Proficiency (AOCP) in July 1924.

To obtain the AOCP, an examination was set to qualify in electrical and radio theory, operating regulations and ability to send and receive Morse code at a speed of 12 words per minute (12 wpm). This Morse speed was maintained for the certificate until around 1946/1947. (It is interesting to note that even in 1914, well before the introduction of the AOCP, the specified Morse code speed was 12 wpm for Experimental stations.)

Whilst the Amateur Operators Certificate has been the minimum qualification to obtain an amateur radio station licence, other certificates which have been accepted are the First and Second Class Commercial Operators Certificate of Proficiency which give qualification at a higher level of radio theory and a higher Morse code speed. (Essentially, these certificates are required for the operation of ships stations, and base stations such as aeradio and maritime radio). Later on, students for higher level radio technicians courses and professional radio engineering courses were also exempted from the theory examination.

Licences to operate amateur stations were suspended during World War 2 and were withdrawn on September 1, 1939. Re-issue of old licences and the issue of new licences started to take place around early December1945 and January 1946.

For amateur station operation, the maximum input power to the final amplifier was 50 watts (and for a pre-WW2 period, 25 watts). A six months probationary period on Morse code was enforced and an equipment inspection by a PMG Radio Inspector was carried out before operation on phone was allowed.

Two new classes of certificate were introduced around 1946/1947. The old certificate was to be known as the Second Class Amateur Operators Certificate but its new issue called for an upgraded Morse speed of 14 wpm. A higher level certificate known as the First Class Amateur Operators Certificate was introduced with a higher knowledge of radio and electrical theory and a Morse speed of 18 wpm.

The new First Class Certificate allowed the operator to increase the maximum input power into the final amplifier to 100 watts.

The two certificate classes lasted barely two years after which the qualification requirement reverted back to a single class certificate with a Morse speed of 14 wpm and which allowed operation with a maximum input power of 100 watts for all amateur stations.

Prior to 1947, the amateur licence was defined as the "Amateur Experimental Licence". However in September 1947, advice was received that redefined the licence as the "Amateur Operator's Licence", and replaced the two existing types of licence with a single licence with a maximum operating power of 100 watts. Only one class of operator's certificate would be issued in the future called the "Amateur Operators Certificate of Proficiency".

COMMONWEALTH OF AUSTRALIA.

Wireless Telegraphy Regulations.

AMATEUR OPERATOR'S

Certificate of Proficiency

In June 1954, the Amateur Operators Limited Certificate of Proficiency (AOLCP) was introduced which called for the full theory qualification but exempted Morse code. With this certificate, the limited operation was restricted to the VHF bands of 50 MHz and above. The Limited call sign issued was initially VKnZxx, with VKnYxx, and VKnXxx later added. The significant characters were the "Z", "Y", and "X".

In 1958, the maximum power input to the final amplifier was increased to 150 W, and this remained the limit until 10 years later, when a maximum RF output power of 400 W PEP (relevant to SSB operation) was introduced.

In 1967, the Morse speed qualification was reduced from the existing 14 wpm to 10 wpm.

The Novice Amateur Operators Certificate of Proficiency (NAOCP) was introduced in 1975 with a lower theory qualification than the AOCP and a Morse qualification requirement of 5 wpm. With this certificate, the Novice operation was restricted to the 10, 15 and 80 metre HF bands. The Novice call sign issued was VKnNxx, the significant character being the "N".

From 1980, operators with both the Novice and Limited certificate accreditations, were issued with the call sign format of VKnJxx and VKnKxx, the significant characters being the "J" and "K". This was later called the "Intermediate Licence".

The requirement for a Morse code qualification on the amateur bands was removed on January 1, 2004 and the Morse qualification to obtain an amateur operators certificate was eliminated.

In October 2005, the new classes of licence, the Foundation licence, the Standard licence and the Advanced licence were introduced. The Advanced licence allowed operation on all amateur bands with RF power output limited to 120 watts continuous and 400 watts PEP. The Standard licence had some limitations on what bands were used and power output was limited to 30 watts continuous and 100 watts PEP. The Foundation licence had further band restrictions with power output limited to 10 watts on all permitted modes.

To qualify for these classes of operation, three new levels of operator certificate endorsed Foundation, Standard or Advanced were introduced with three different levels of qualification. The existing unrestricted (AOCP) and Limited (AOLCP) certificates were also accepted for all levels of licence. The existing Novice (NAOCP) certificate was also accepted for the Standard or the Foundation licence. The Novice Limited (NLAOCP) certificate was also accepted for the Foundation Licence. The new levels of licence are also defined in the call sign format. Detail of this can be found in later additions of the Call Book under the heading "A Guide to Amateur Licensing and Regulation".

As the one time controller of telecommunications in Australia and the manager of licences issued for the radio spectrum, the PMG controlled the issue of amateur radio licences and operators certificates for many years. The controlling agency is now the Australian Communications and Media Authority and examination for Certificates is now greatly assisted by appointed members of the WIA – the WIA Assessors.

Supervision of examinations for the Amateur Certificate was originally carried out by Radio Inspectors in the Radio Branch of the PMG. However I can quote my own case where I was supervised by the Postmaster at Murray Bridge, including the examination for Morse code. In those days the postal staff were very efficient in operating the telegraph and reading the "click-clack" of the telegraph sounder. The Postmaster could only read the sounder and I had learned to read keyed tone. I brought along a buzzer connected to a Morse key which he used to send Morse to me and he opened up the telegraph line for me to send Morse to him.

THE WHEELS OF CANBERRA

In May, 1953, we informed you that the Postmaster General's Department had agreed to the issuance of the Technician License, or as it is now known, the "Amateur Operator's Limited Certificate of Proficiency."

In December, 1953, we recorded our disappointment at the delay in completion of machinery necessary to fully implement the scheme.

Now, we are happy to announce that "the wheels of Canberra" have completed their slow revolutions and every last cog has been fitted into its assigned place. The result may be read in "Amendments to the Wireless Telegraphy Regulations CSR 1954 No. 50."

The self same document also requires future applicants for both "A.O.C.P." and "Limited A.O.C.P." to pay one pound examination fee. An imposition that we know will not in anyway dampen the enthusiasm of the genuine candidate.

To turn to the bright side of the picture, we remind A.O.C.P. candidates who failed in Morse Code only since January, 1953, that they are now eligible for Limited A.O.C.P. and should make immediate application.

Many technically capable enthusiasts who lacked morse qualifications now have the opportunity to show their ability and keenness. Undoubtedly in the near future the v.h.f. bands will become densely populated by a new race of keen experimenters. It is from the ranks of these men that the C.D.E.N. will draw most of its personnel in future national emergencies. So give them every encouragement chaps!

FEDERAL EXECUTIVE.

Figure 2: A 1954 Editorial from Amateur Radio advising of the new Limited Operators Certificate (From the records held by the WIA Historian).

Licensing option	*Minimum qualifications required*
Advanced	Amateur Operator's Certificate of Proficiency (Advanced) (AOCP(A)), or Amateur Operator's Certificate of Proficiency (AOCP); or Amateur Operator's Limited Certificate of Proficiency (AOLCP).
Standard	Amateur Operator's Certificate of Proficiency (Standard) (AOCP(S)); or Novice Amateur Operator's Certificate of Proficiency (NAOCP), or Novice Limited Amateur Operator's Certificate of Proficiency (NLAOCP).
Foundation	Amateur Operator's Certificate of Proficiency (Foundation) (AOCP(F)).
Repeater and Beacon	Amateur Operator's Certificate of Proficiency (Advanced) (AOCP(A)); or Amateur Operator's Certificate of Proficiency (AOCP); or Amateur Operator's Limited Certificate of Proficiency (AOLCP) Amateur Operator's Certificate of Proficiency (Standard) (AOCP(S)); or Novice Amateur Operator's Certificate of Proficiency (NAOCP), or Novice Limited Amateur Operator's Certificate of Proficiency (NLAOCP)

Figure 3: Certificate qualifications for the various classes of licence commencing October 2005 (Chart from the WIA 2009 CallBook).

Acknowledgement

My thanks to WIA Historian Peter Wolfenden VK3RV for his time cross checking historic details written here with documented records held in the WIA files.

PSK31 QRP is great fun

Grant McDuling VK4JAZ

Photo 1: The PSK31 kit as it arrived from Small Wonder Labs.

QRP has long been a passion of mine, not only because of the challenge of communicating with someone far away with as little power as possible, but also because it allows me to build my own rigs that I can use to achieve that. This ensures I can delve into electronic theory and keep some of the work I did when studying for my licence from becoming lost in the mists of time.

I have also always been fascinated by computer technology and the thought of being able to combine radio with computers not only seems logical to me, it also is hugely enticing. Being able to work the digital modes with a QRP rig rapidly rose up my wish list, to the point where I had to action it and make it happen. So I turned to the internet once more and ordered a PSK31 kit from Dave Benson at Small Wonder Labs (www.smallwonderlabs.com) in the US. Dave is, of course, a legend in the world of QPR kits, having made his name with the ubiquitous RockMite 500 mW kit.

After a short wait, the kit arrived and I was delighted at its quality.

The double-sided PCB measures 13.4 cm x 11.7 cm (5.27" x 4.6" in the old language), has plated-through-holes and is solder masked/silk screened for easy assembly. The 24-page instruction manual, which is extensive and professional and includes colour figures, came on a CD. It was thorough and easy to follow.

Building this little beauty was really easy. In fact, it was the easiest and most straight forward kit I have built to date. No fancy tools or test gear was required and there were no surface mount components to worry about – the single surface mount component was already soldered to the PCB. I particularly liked the fact that there were only four toroids to wind! Once built, the number of adjustments required to tune the rig was minimal and easy to do. The rig also has no harness wiring to worry about. All interface connectors mount on the rear of the circuit board.

One of the features that attracted me to this rig is the fact that it is directly compatible with my computer. No extra interface unit or TNC is needed; once the transceiver kit is assembled, it's 'plug-and-play',

Photo 2: The completed circuit board undergoing testing on the bench.

Photo 3: The finished unit in its neat box on the shelf in the shack.

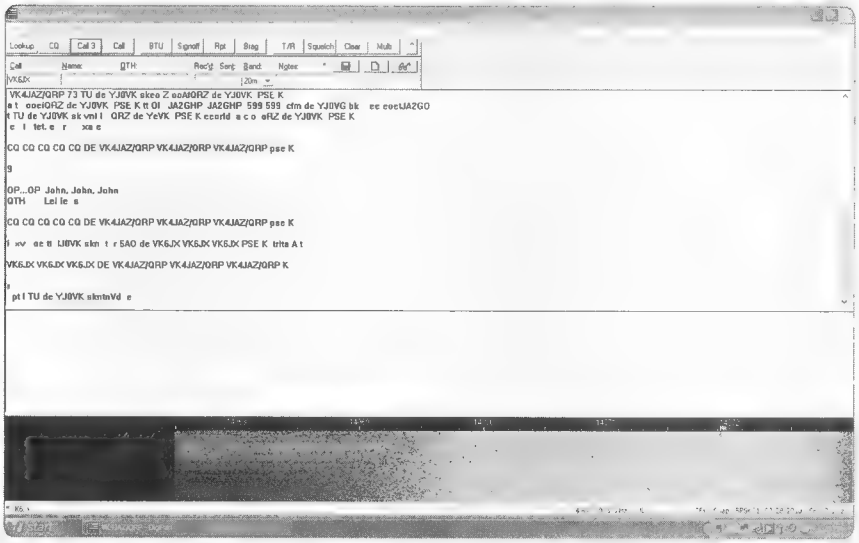


Photo 4: A screen shot of the Digipan software in operation.

with all operating adjustments being made via the computer. Just hook up the rig to the Microphone In and Line Out sockets of any computer or laptop, using standard stereo cables (I bought mine for $2 each from the local dollar-type shop). Power of between 12 V and 15 V needs to be supplied via a 1 A regulated power supply.

This has got to be one of the easiest, and most satisfying, kits on the market to build. All that was needed once the build phase was complete was to add a computer (with free DigiPan software) and a 50 ohm antenna and I was on the air with PSK31 in no time at all, with no drift, no VFO tuning and no fuss!

The Small Wonder Labs PSK31 rig is crystal-controlled and has an output power of three to four watts PEP. The crystal control provides excellent stability and its simplicity keeps the cost low. The rig I chose to build was the 20 m version, but they are available for the 30 m and 40 m bands as well.

The completed kit slips into a very nice and professional looking metal enclosure, which is one of the best I have seen. I use my little PSK rig on a daily basis now, and even though 20 m has not been the best band for QRP operation lately, I have staggered DX operators in Russia, Japan and the US with great signals. It continues to amaze me as well as those I meet on the keyboard.

Over to you

Dear Editor,

I enjoyed reading Warren Stirling VK3XSW's *An 'SGC-230' autocoupler repair* article in the October 2011 issue of *Amateur Radio*.

In a previous job I was responsible for repairing couplers like these, and it was good to be reminded of their layout and workings – thank you Warren.

I also worked on the later version of SGC230, which has a similar LC and relay arrangement, but very different microprocessor circuitry. If one of these is encountered which fails to tune at all, the fault may be the failure of one or more surface-mount diodes – D4, D9 or D10. Replacement with BAV70 or BAV99 type diodes is one possible remedy for such problem.

Warren's article refers to the use of a 100 W, 2.2 ohm resistor as a dummy load – I can advise another effective dummy load is an old-style 240V incandescent light globe. From experience, a 60 watt version worked well from 2 to 30 MHz when connected with short leads across the coupler's antenna and earth studs. Cheaper than the resistor, and with the added bonus of a visual indication when the coupler is correctly tuned.

These globes are becoming harder to obtain with the advent of compact fluorescent and energy-efficient models, however if you can locate one I recommend keeping it for test load use.

The re-badging of these couplers by local HF manufacturers is done in collaboration with SGC on an OEM basis, and both Barrett and Codan may be willing to provide technical assistance or supply parts for their versions of the couplers.

Best 73

Anthony Benbow VK6AXB *axb@iinet.net.au*

An unforgettable lesson

Alan Elliott VK3AL

My radio career almost came to a premature end. But let me start at the beginning.

In 1927 there were valve receivers but even the simplest valve set was far too expensive for us. For example, a three valve TRF set cost about 30 pounds ($60). We had to be content with a crystal set, and even that cost Dad at least a week's wages. He assembled the set from a kit, put up a mast for the aerial and hammered a piece of water pipe into the ground for the earth connection. Suddenly we were in the new era of wireless reception.

To a small boy, the thrill of adjusting the springy wire in the detector to find a sensitive spot on the galena crystal whereupon the scratching sounds suddenly changed to music in the headphones cannot adequately be described. Music coming through the air! Surely this was magic! I was hooked. I do not have a photograph of our family crystal set, however by a strange coincidence we do have a photograph of the actual crystal detector from our first wireless set, thanks to Jim Gordon.

A few years later we acquired a three valve TRF set with a loudspeaker. The new set was called a 'Seyon' which was the name of the Australian manufacturer, Noyes Brothers, spelt backwards! The two valve plus rectifier set consisted of a regenerative detector, transformer coupled to a triode audio amplifier. This wireless opened up a new world for me.

Amateurs with special licenses were allowed to operate on fixed frequencies at the high frequency end of the broadcast band until noon on Sundays. I could hear four or five amateur stations from my home at Ascot Vale. I think the amateurs were also allowed to operate after the A and B stations closed down at night but that was past my bedtime.

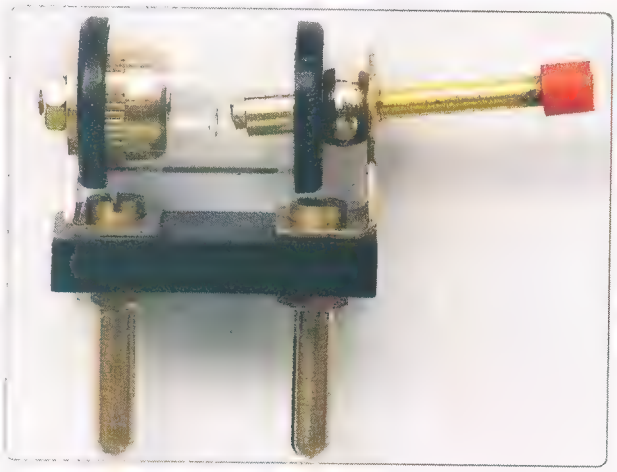


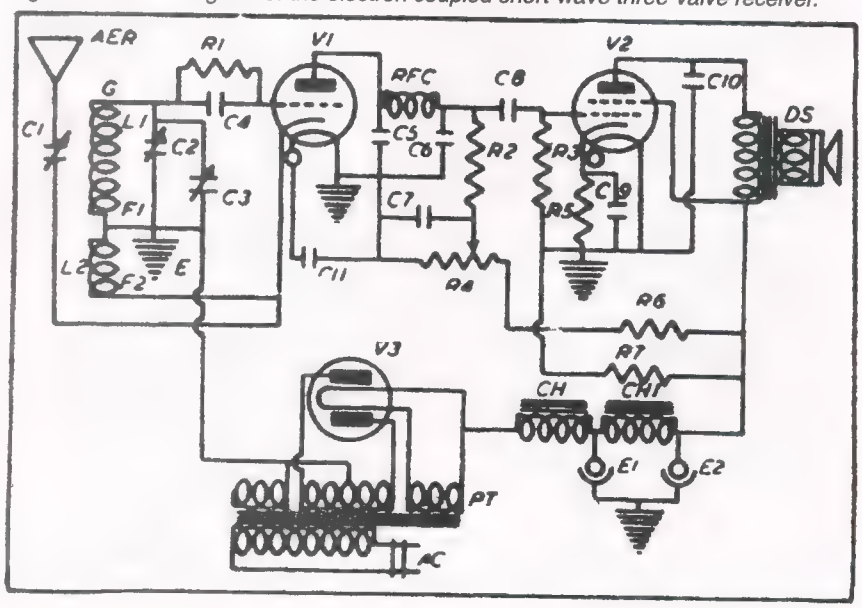
Photo 1: Our 'Cat's whisker' detector. Photo courtesy Jim Gordon VK3ZKK.

I am yet to discover the regulations under which the broadcast band amateurs were licensed. Alan Shawsmith mentions that they were limited to 25 watts DC input (1). They were licensed to play records and make station announcements but they were forbidden, as were other amateur operators, to make remarks about politics, religion and other sensitive subjects on air. I remember that the broadcast band amateurs were highly regarded by the general public.

Given the low power and inefficient aerials of the amateur transmitters and our simple regenerative receiver it is hardly surprising that my success was limited, but trying to 'tune in' the broadcast amateurs gave me my first taste of weak signal reception.

Sometime in the middle 1930s I discovered that amateur radio operators were not only active on the broadcast band but were also to be found on short waves. I was given access to my cousin's five valve dual waver. I knew nothing about sunspot-cycles but it so happened that Cycle 18 peaked about 1937, coinciding exactly with these events. Propagation conditions then were excellent. Overseas shortwave broadcasting stations and

Figure 1: Circuit diagram of the electron coupled short-wave three-valve receiver.



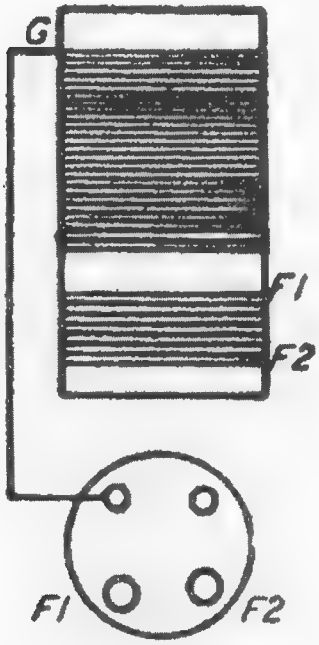


Figure 2: The coil layout.

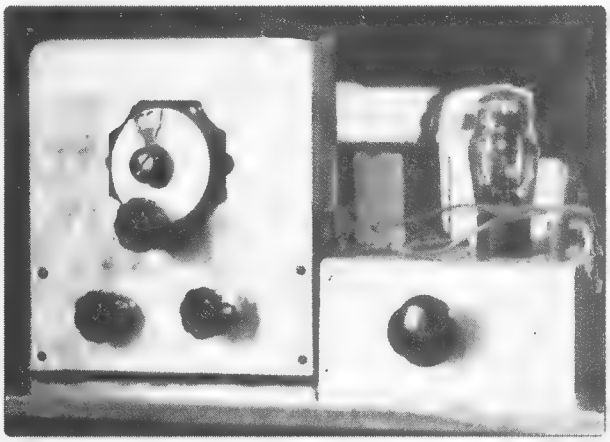


Photo 2: This is my home-made short-wave receiver and its separate power supply which almost brought a premature end to my career about June, 1938. Below the main tuning knob are the aerial trimmer C1 and the regeneration control R4. There is no audio gain control: the aerial trimmer served to control the volume. On the power supply chassis is the mains power switch. In those days there was no mains earth wire but I did have an earth connection to the water-pipe.

amateur stations came in strongly. I was carried away on hearing the BBC, stations in the USA, Holland, Japan, Mexico and many other countries. This was my first taste of DX. It was heady stuff.

It was the amateur stations which excited me most. Often I could hear both sides of the contact and was fascinated by the fact that people could talk to each other across the globe from their own stations at home. I started to learn the amateur shorthand—QRM, QRN, QSO and all the rest. I discovered that I too, could get 'on the air', but in order to do so I would have to learn the PMG regulations, radio theory, Morse code and pass an exam. I resolved to build a shortwave receiver but my pocket money was not enough to buy the necessary components.

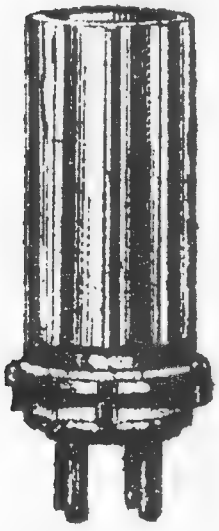


Figure 3: The Marquis coil former.

I started work at the beginning of 1938, at age 16. With a weekly wage of 15 shillings ($1.50) I had to rely on my parents for support but now I had a little more pocket money. I was attending chemistry classes at the Melbourne Technical College three or four evenings a week. On Friday nights when the shops were open I could be found haunting the radio shops in Swanston Street on my way to Flinders Street railway station. By buying cheap components at Veal's basement discount store I was able to gather together the bits and pieces for a short wave receiver featured in the *Listener-In* of January 22, 1938. The circuit consisted of a 76 triode regenerative detector, a 42 pentode power amplifier and an 80 rectifier. As valves were expensive the set was designed to be as simple and cheap as possible. An obvious shortcoming was that the lack of an audio amplifier valve between the 76 and the 42, but I did not know that. With no-one to advise me I just followed the published circuit as closely as possible.

Before starting the project I made what seemed like a sensible decision. I put the power supply on a separate chassis so that it could be used for other projects. Constructing the set posed many problems. I had to make the chassis from sheet aluminium. Cutting holes for the valve sockets was difficult as I didn't have a socket punch so I drilled a series of small holes in a circle, cut out the centre with a cold chisel and then filed the jagged hole to a smooth circle with a half-round file. Mounting the tuning condenser to a flexible coupling and the vernier tuning dial was another challenge. After assembling the main components I had to learn how to solder. I used Dad's soldering iron heated on the gas stove. Dad used 'killed spirit of salts' (1) as a soldering flux but fortunately I had found out that this was too corrosive for electrical circuits. I bought some resin-cored solder and gained some practice on scrap pieces of wire before working on my receiver.

I wound three coils on Marquis Bakelite plug-in formers exactly to the specifications given in the article. Eventually, after several weeks of spare-time effort my set was ready for testing.

I connected the aerial and earth wires, plugged in the 76 and the 42 valves, connected the heater and high tension wires to the power supply, plugged the power supply into the mains and turned on the mains switch. The valve heaters glowed a satisfactory red. So far, so good.

Next, I plugged in the 80 rectifier valve whereupon its filament too

Photo 3: Alan, age 17, with his home-made short-wave set, January, 1939.

glowed red. This was all very promising except that no sound was coming from the speaker. I switched off the set and checked over the wiring. Everything seemed correct. This was very puzzling, but I had no-one to turn to for advice. Next day I tried again and this time something dramatic happened. When I inadvertently touched the front panel of the receiver with one hand and the chassis of the power supply with the other at the same time I got a massive electrical shock! I didn't tell my parents about this because they were already apprehensive about my playing with mains operated equipment. Why was there a big voltage difference between the two chassis? I did not have the faintest idea.

After thinking about this for some time the penny dropped. In departing from the original design I had made a serious and potentially fatal error. I had connected the two heater wires and the high tension lead but had not realised that an earth connection between the two chassis was necessary. With no earth return the open-circuit potential between the two metal chassis must have been well over 300 volts. I could easily have been electrocuted. After installing an earth connection I was immediately rewarded with sounds from the loudspeaker—and no more shocks.

On turning the tuning control knob I was excited to hear an amateur phone station coming in loud and clear. That station was VK3LN, operated by Len Moncur about a mile away to the west. Len was on the 20 metre band in contact with a VK2 in Sydney whose signal was also loud and clear but fading up and down. It was a Sunday morning in mid-1938. I had to stop experimenting and go to church. I was impatient to get home and the sermon seemed even longer and more tedious than usual.

Soon I was listening to amateur stations from around the world as well as short-wave broadcasting stations such as KZRM in Manila, W8XK in the USA, HCJB in Ecuador, PCJ in Holland and of course the BBC on several frequencies. Receiving overseas stations on my own set! I could hardly contain my excitement. I became an ardent short-wave listener, sent off reports and received verification cards in return.

Of particular interest was the BBC on the 30 MHz band, when sometimes there was an echo effect, apparently caused by the time difference between signals arriving by both the long and short paths. Listening to short-wave stations was interesting but it was essentially a passive hobby. It became clear to me that there was little incentive beyond listening to foreign stations (which in those days were particularly interesting because they often took a feed from a domestic program), and the logging of ever more elusive stations. I wanted more than that. I became determined to get an amateur transmitting licence so that I could have my own station.

I found *Amateur Radio*, the magazine of the WIA, and QST, the journal of the ARRL at McGills bookshop in Elizabeth Street and read them with interest. I started practising Morse code. In April, 1939 I bought the first issue of *Radio and Hobbies in Australia*, a magazine which had considerable appeal for electronics enthusiasts. Nothing was going to stop me from getting the coveted 'ticket' and joining the ranks of what was certainly a select group of enthusiasts. Then the war intervened and amateur radio was shut down. In 1946 I joined the WIA but other matters took up my spare time and it was not until 1955 that I obtained my limited license and the full call in 1956. Amateur radio opened new and totally unexpected vistas for me, but that is another story.

Reference

Alan Shawsmith VK4SS, *The Story of Amateur Radio in VK4, Queensland, Australia,* 1987.

Coming Events

6 November
VK3 – Yarra Valley ARG Hamfest,

20 November
VK5 – AHARS Hamfest Goodwood Community Centre.

VK5news AHARS

David Clegg VK5KC

Photo 1: Christine VK5CTY cuts the ribbon.

September 3rd was the official opening of the club 'Shack'. Much has already been written. Around 70 people attended the day, including the local Mayor and representatives from the Guides. The opening was carried out by Christine Taylor VK5CTY, XYL of the late Geoff VK5TY.

Photo 2: Roy VK5NRG and Barry VK5BW proudly display their Certificates of Appreciation.

Geoff was the longest serving Club President. Barry VK5BW and Roy VK5NRG were presented with Certificates of Appreciation for all their work in renovating the 'Shack'. Many members helped, but Barry and Roy played a major part in the work. Elsewhere in AR is an article by John Elliott VK5EMI covering the opening ceremony.

Photo 3: Barry VK5BW and Alf VK5AJF and the vector analysis of his loop antenna.

On September 10th and 11th the Club ran a Foundation licence training day, with an examination on the Sunday. Nine students attended with seven passing the Foundation exam and two passing the Standard licence. Congratulations to all. Thanks to Barry, Sasi, Paul and Kevin for their help.

On Saturday 17th 14 people gathered at the 'Shack' to modify old computer power supplies to work at 13.5 V, 20 A. Several were successful on the day with the rest to be finished at home. On Saturday 24th around 40 members and spouses gathered at the 'Shack' for breakfast. An enjoyable morning was had by all.

Our September meeting was presented by Barry VK5BW on his vector analysis unit, which he built from a kit. This unit displays graphs in real time for VSWR, filter bandpass and antenna bandwidth. Thanks Barry for a very well presented lecture.

All AHARS meetings are recorded and are available as a DVD from the Club for $10 posted. Trevor Quick VK5ATQ spoke on his life in amateur radio.

The Club will be involved in JOTA and JOTI in October and will host the Buy and Sell on Sunday, November 20th at the Goodwood Community Centre. Doors open at 9 am for buyers and selling commences at 9.30 am.

The club Christmas lunch will be held on Sunday, December 4th at the Mt Osmond Golf Club. Book and pay early to save money.

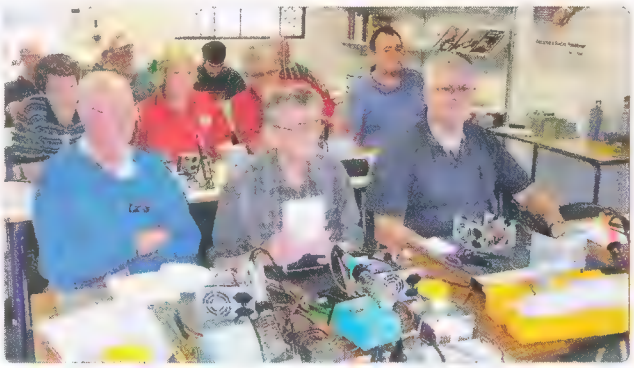


Photo 4: The AHARS power supply modification day.

ALARA

Margaret Blight VK3FMAB – Publicity Officer

ALARA's mission is to encourage women's interest and active participation in amateur radio. ALARA was formed in 1975 by a small group of Australian ladies interested in amateur radio. Membership has now grown to over 200, with many Australian members sponsoring overseas YLs into ALARA. The term 'YL' stands for 'young lady' – regardless of age. The following information may encourage members, who have not been active on radio for a time, to join in on the ALARA net and other activities to reconnect with other female operators who will be very encouraging and welcoming.

Photo 1: L-R: Helen R, Jean VK3VIP, Muriel M, Margaret VK3MAB, Robyn VK3WX, Pat VK3OZ, Elaine VK3EQY, MEG VK5YG and Kathy VK3XBA.

Net	Day	Time	Frequency
ALARA	Monday	1030 UTC[1]	3.580 MHz +/-
YL 222 DX	Monday	0530 UTC	14.222 MHz
YL Activity day	6th each month	On hour. Call 'CQ YL'.	14.288 MHz[2]
Birthday Net	4th Sat July	1000-2000 UTC	3.588 MHZ +/-

[1] During daylight saving, 1000 UTC.

[2] Also found on 21.188 MHz and 28.588 MHz.

ALARA travels

This year has seen many ALARA members spread their wings and travel both within Australia and overseas. It is good to hear their stories. Space does not allow publication this month, but hopefully we can publish some from time to time.

News from VK5 – Christine VK5CTY

Over the weekend of 17/18 September, Jenny VK5FJAY, her OM Kevin VK5AKZ and Christine VK5CTY attended the North Queensland Radio Convention in Chartres Towers. They had met most of the members four years before when the Convention was held in Townsville so they were greeted as old friends.

There was a Get-Acquainted evening on the Friday, and official registration the next morning. The mayor of Chartres Towers opened the meeting with a story from his childhood. Only a matter of weeks after the Chartres Towers Flying Doctor service was opened he became very ill on the station where he grew up. There was no plane yet but they had been provided with a medicine kit and a radio. Under instructions from the doctor-on-air the family was told to treat his fever with sulpha drugs, identified by number. He recovered fully from what was later diagnosed as Rheumatic Fever! He was possibly one of the first children to be given that 'wonder drug'. It is no wonder that he is well-known for raising funds for the Flying Doctor each year...

Later in the morning there was a visit to a museum filled with family and farm type items from bygone days, all set up by a Zara Clark. Everyone who visited the museum found something of particular interest.

We also visited the Historic Ambulance Museum which has a patterned tin ceiling that is particularly beautiful. This was of special interest to Jenny, a member of St John for 40 years, and her OM who was a member for about 20 years. We were told that there is a similar ceiling in the Target store in the main street. Well done for preserving such treasures.

Of special interest of us all was the gold processing plant we visited on Sunday. There were several very modern displays of 'the Ghosts of the Mining era'. Until just a few years ago this plant was virtually derelict as the refining of gold is now done in Townsville. The man who led us around has done a lot of research to make it an extremely interesting tour- he had spent his working life as a station hand.

There are now only two members of ALARA in the North Queensland radio club, Lyndall VK4ZM and Cheryl VK4RYL but there were a number of XYLs participating in the Meet who clearly know each other well, just as over 30 years ago the YLs and XYLs who formed ALARA. Maybe some of them will decide to join the YL International MEET and go on the Ghan, too.

The main venue for the Conference was the local RSL Club and they turned on some very good meals for us and made us

very welcome. I am told the Boot Sale went well and that TET-Emtron and Navcom Electronics certainly generated a lot of interest.

There was a competition for home built equipment which attracted a number of interesting entries, a competition for garden produce which only had one entry, a positively enormous bowl of parsley, and a craft competition for the ladies. Jenny VK5FJAY won the third prize with her tatting – which she had only learned a few weeks earlier. We may see you in two years.

VK3 News

On September 10th Meg VK5YG and her OM David were greeted by a number of ALARA members at a luncheon at the Mountain View Hotel in Glen Waverley. Meg and David were in Melbourne on the last leg of a lengthy tour overseas. Meg admitted they had not been home since June and they were both looking forward to finally returning to South Australia. The lunch was a great success and it was very pleasant to see some members present who sometimes found it difficult to make the bi-monthly ALARA lunches. This gave everyone plenty of opportunity to catch up on the news and the conversation flowed happily.

ALARA lunch

On 24th September the ALARA lunch was held at the Society Restaurant in Melbourne. As the venue was close to Parliament railway station it was possible for most of the attendees to travel by train, saving the worry of trying to locate a car park. The exception to this was Cristina VK3FCRS who spent the previous night at a city hotel to celebrate her wedding anniversary with OM David, who also celebrated his birthday. Our congratulations went to them both. Everyone enjoyed a very pleasant meal and we look forward to our final get-together for the year which will be our Christmas lunch. Our host for the day will be Susan VK3UMM who will open her home for the occasion. We look forward to seeing a good number of ALARA members there.

Photo 2: The ALARA VK3 September lunch.

VK3news Yarra Valley Amateur Radio Group

Brian Andrews VK3YBJ

The Yarra Valley ARG is a small friendly Club located at the Yarra Glen Scout Hall, Steels Creek Road, Yarra Glen. The rooms have an excellent site for the erection of antennas, and this has been an ongoing work in progress. There has been a renewed interest in contesting this year, due to newer club members getting involved. Each event has had its share of little problems with cross band interference, and a good but not perfect field day site due to trees.

Now that we have a caravan for operations, even the Winter VHF/UHF event is not too uncomfortable.

What we need now is more people to talk to, otherwise the call of a nice warm campfire is too much temptation for some members. Our meetings are held on the 2nd and 4th Tuesdays at the clubrooms.

The Yarra Valley ARG will be holding its next Hamfest on 6th of November, 2011 at the Garry Cooper Pavillion in Anzac Avenue, Yarra Glen.

Due to ongoing problems with the February Date and clashes with Wyong and *AR* Vic. Hamfests, the committee has decided to move the event to November each year. Rather than miss a year before the change, we have reset the time for this year.

As the event has always been well supported at the Healesville Hall, the move to the Yarra Glen venue has been necessary due to lengthy building works at our usual venue. Table prices will stay the same for this year, and a warm welcome is extended to our usual trade and private traders. So come along and see us in the Yarra Valley on Sunday 6th November 2011.

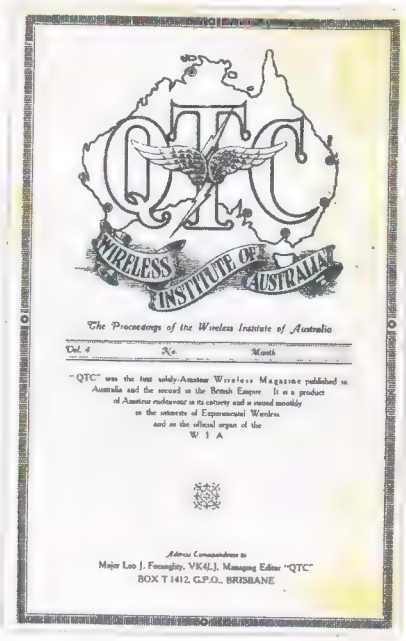
VKLOGGER

Are you an active radio amateur? Interested in what might be happening NOW with regards propagation?

Consider registering on vklogger.com (free). Three propagation loggers (HF, 6 m, and 2 m, 70 cm and above, plus chat channels and a large discussion board holding a wealth of information.
http://www.vklogger.com/

Hamads

WANTED – NATIONAL


QTC
WIRELESS INSTITUTE OF AUSTRALIA
The Proceedings of the Wireless Institute of Australia
Vol. 4 No. Month
"QTC" was the first solely-Amateur Wireless Magazine published in Australia and the second in the British Empire. It is a product of Amateur endeavour in its entirety and is issued monthly in the interests of Experimental Wireless and as the official organ of the W I A
Address Communications to
Major Lee J. Fenaughty, VK4LJ, Managing Editor "QTC"
BOX T 1412, G.P.O., BRISBANE

Early copies of QTC magazine.
The WIA Archive is seeking early copies of QTC magazine for copying and/or adding to the WIA Archive's shelves.
QTC was published in Queensland and claimed to be the first solely Amateur Wireless magazine in Australia and second in the British Empire!
The format was duplicated foolscap pages stapled, with a light blue/grey front cover. QTC was published in the late 1920s/early 1930s, ceasing in November 1931; VK4LG was the dedicated editor. There was a later version in Queensland.
We are presently interested in the early editions only.
Please contact Peter VK3RV via email *vk3rv@wia.org.au* or c/o the National Office in Bayswater if you can help us locate this important part of our history.

FOR SALE – VIC

All you need to set up a station at an affordable price and with proven equipment.
Antenna tuner Daiwa, 200 watts PEP, crossed needle type, frequency range 3.5 to 30 MHz. Ser No 07304. Going for $75.00.
Transceiver, Icom IC-718, 100 watts, fitted with DSP module, covers all HF bands including WARC. Complete with hand held microphone, Icom HM38 and comprehensive manual. Serial No 12216, and priced at $675.00.
Power supply, 13.8 VDC 15 A continuous, 17 A on 50% duty cycle. Made by Powertech, Serial No N16511. For sale at $120.00.
Two metre HH, Quansheng, with charger and handbook, Serial No 8008070138. For sale, $55.00.
Sell complete or will separate, buyer to arrange collection or delivery.
Contact Laurie VK3BV, phone 03 5975 0306 or email *shirlau@netbay.com.au*

WANTED – VIC

Any documentation for the Philips RCL Bridge, model PM6300 – but preferably a manual or schematic. It needs a bit of attention, but I have been unable to locate a schematic.
I am also interested in purchasing a capacitor tester/reformer for electrolytics (as distinct from paralytics). Perhaps similar to Hallicrafters HC-1 or Heathkit C-3 or IT-28.
Contact Mike VK3KRO, QTHR.
Email: *vk3kro@yahoo.com* or phone 0417 358 751.

FOR SALE – NSW

VK2AYL is no longer able to go on the air, having moved into a nursing home for good.
I have for sale an IC-7400, model 107400, S/N 01449, priced at $1500.00. Call my son Peter, on 02 4981 7173, for the location of the transceiver.
Thanks - Stan VK2AYL.

WANTED – NSW

Icom IC-260 (2 metre all mode transceiver) service manual. In any condition, original or photocopy OK. Please contact Chris VK2CY QTHR, or *vk2cy@wia.org.au* or phone 02 97631407 anytime.

FOR SALE – SA

Christmas is coming soon. Shout yourself, or get the significant other to get you a great present. The VK5JST Antenna Analyser kits are available through the South Coast Amateur Radio Club. Get in early as stock goes quickly at this time of the year. See *www.scarc.org.au* or contact SCARC, PO Box 333, Morphett Vale. SA. 5162. Alternatively email *kits@scarc.org.au*

"Hey, Old Timer..."

If you have been licensed for more than 25 years you are invited to join the

Radio Amateurs Old Timers Club Australia

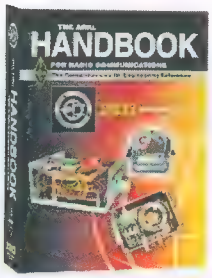
or if you have been licensed for less than 25 but more than ten years, you are invited to become an Associate Member of the RAOTC.

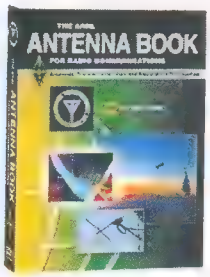
In either case a $5.00 joining feeplus $8.00 for one year or $15.00 for two years gets you two interesting OTN Journals a year plus good fellowship.

Write to **RAOTC**
PO Box 107, Mentone VIC 3194

Ron Cook 03 9579 5600

or Bill VK3BR on 03 9584 9512, email *raotc@raotc.org.au* for an application form





The ARRL HANDBOOK
The ARRL ANTENNA BOOK

These two new edition texts will soon be available in both hard and soft cover format from our online bookstore.

For more details, head to *www.wia.org.au/members/bookshop/about/* or contact the WIA office on **03 9729 0400** between 10.00 am and 4.00 pm (EST).

Contributions to Amateur Radio

AR is a forum for WIA members' amateur radio experiments, experiences, opinions and news.

Your contribution and feedback is welcomed.

Guidelines for contributors can be found in the *AR* section of the WIA website, at *http://www.wia.org.au/members/armag/contributing/*

Email the Editor: *editor@wia.org.au*

About Hamads

- Submit by **email (MUCH PREFERRED)** or if written and mailed please print carefully and clearly, use upper AND lower case.
- Deceased estates Hamads will be published in full, even if some items are not radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.
- QTHR means the address is correct in the current WIA Call Book.
- Ordinary Hamads from those who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re-sold for merchandising purposes.
- Commercial advertising on these pages Contact *admanager@wia.org.au*
- Copy to be received by the deadlines on page 1 of each issue of Amateur Radio.
- Separate forms for For Sale and Wanted items. Include name, address STD telephone number and WIA membership number.

'Hamads'
PO Box 2042
BAYSWATER VIC 3153
hamads@wia.org.au

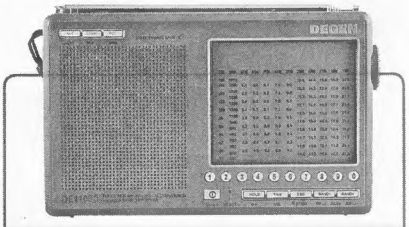
AMIDON
FERROMAGNETIC CORES
tts systems
Phone 03 5977 4808. Fax 03 5977 4801
info@ttssystems.com.au

VKHAM.COM
AUSTRALIAN AMATEUR RADIO
Hundreds of pages and links related to Amateur Radio and radio in general
HOME OF
- VK Classifieds
- VK Auctions
- VKs on the Internet

Repeater Maps, Software, Prefix Maps and more...

RM Products Italy
are now available in Australia after the appointment of
Hamak Electrical Industries Pty Ltd
as distributor for RM products
Visit the Hamak website at
Hamak.com.au
for
Linear amplifiers, Power supplies and accessories

JACKSON BROS
www.jacksonbrothers.com.au
Highest quality products made by UK craftsmen
Variable and trimmer capacitors, reduction drives, dials, ceramic standoffs
CATALOGUES, PRICE LISTS AVAILABLE
HAMMOND ENCLOSURES
HAMMOND MANUFACTURING. *Large range of quality electronic enclosures for the discerning Radio Amateur.*
Diecast, extruded aluminium and plastic enclosures and instrument cases. As seen in many ARRL projects.
Cookson Controls CHARLES I COOKSON PTY LTD
11-13 Port Rd Queenstown SA 5014
Tel: (08) 8240 3200 Fax: (08) 8240 3233
sales@jacksonbrothers.com.au
ccookson@hammfg.com
ALL MAJOR CREDIT CARDS ACCEPTED
SOLE AGENTS AUSTRALIA AND NEW ZEALAND


DEGEN 1103 HF Receiver
Pocket sized, 100 kHz - 29,999 kHz
LCD display, SSB, AM wide/narrow
FM Stereo, DX/Local, 10 m long wire
NimH batteries & charger
Earphone & Carrycase included
Full review Silicon Chip Jan 2007
ONLY $99 with 12 month warranty
Av-Comm Pty Ltd
24/9 Powells Road
Brookvale NSW 2100
Tel: **02 9939 4377**
Fax: **02 9939 4376**
Email: *info@avcomm.com.au*
www.avcomm.com.au

ADVERTISERS INDEX

Av-com	55
Com-an-tena	19
Cookson (Jackson Bros)	55
Hamak Electrical Industries	55
Icom	OBC
Jaycar	17
TET-Emtron	25
TTS	15, 55
Yaesu (Vertex)	IFC

TRADE PRACTICES ACT
It is impossible for us to ensure that the advertisements submitted for publication comply with the Trade Practices Act 1974. Therefore, advertisers will appreciate the absolute need for themselves to ensure that the provisions of the Act are strictly complied with.

VICTORIAN CONSUMER AFFAIRS ACT
Advertisements with only a PO Box number address cannot be accepted without the addition of the business address of the box-holder or seller of the goods.

Directory

National Office

Unit 20, 11-13 Havelock Road
PO Box 2042 BAYSWATER VIC 3153

Contact 10 am to 4 pm weekdays
Phone **03 9729 0400** Fax **03 9729 7325**
nationaloffice@wia.org.au
http://www.wia.org.au

The Amateur Service
... a radio communications service for the purpose of self training, intercommunication and technical investigation carried out by amateurs, that is, by duly authorised persons interested in radio technique with a personal aim and without any pecuniary interest.
56 ITU Radio Regulations

Advisory Committees

New South Wales/ACT Advisory Committee
Email: *vk2advisory@wia.org.au*
*John Bishop VK2BK
Dominic Dahl VK2YDD
#Timothy Mills VK2ZTM / VK2UJ
Gilbert Hughes VK1GH

Victorian Advisory Committee
Email: *vk3advisory@wia.org.au*
*Bob Tait VK3XP
Luke Steele VK3HJ
Noel Ferguson VK3FGN
Chris Chapman VK3QB

Queensland Advisory Committee
Email: *vk4advisory@wia.org.au*
Don Wilschefski VK4BY
Kevin Johnston VK4UH
*Michael Charteris VK4QS
Alan Shannon VK4SN

South Australian Advisory Committee
Email: *vk5advisory@wia.org.au*
*David Clegg VK5KC
#Peter Reichelt VK5APR
Ben Broadbent VK5BB
Trevor Quick VK5ATQ

Western Australian Advisory Committee
Email: *vk6advisory@wia.org.au*
*Martin Stretton VK6ZMS
#Heath Walder VK6TWO
Craig Lamb VK6FLAM

Tasmanian Advisory Committee
Email: *vk7advisory@wia.org.au*
Clayton Reading VK7ZCR
*Justin Giles-Clark VK7TW
Peter Rumble VK7IY

Northern Territory Advisory Committee
Email: *vk8advisory@wia.org.au*
*Peter Blackadder VK8HPB
Garry Woods VK8GW
#Alan Baker VK8AB
Mark Sellers VK8MS

#Denotes Committee Chairman
**Denotes nominated by the WIA Board ("Nominated Member")*

ARDF action

Darian Panter VK3FAST, Australian Team Leader.

Bryan Ackerly VK3YNG.

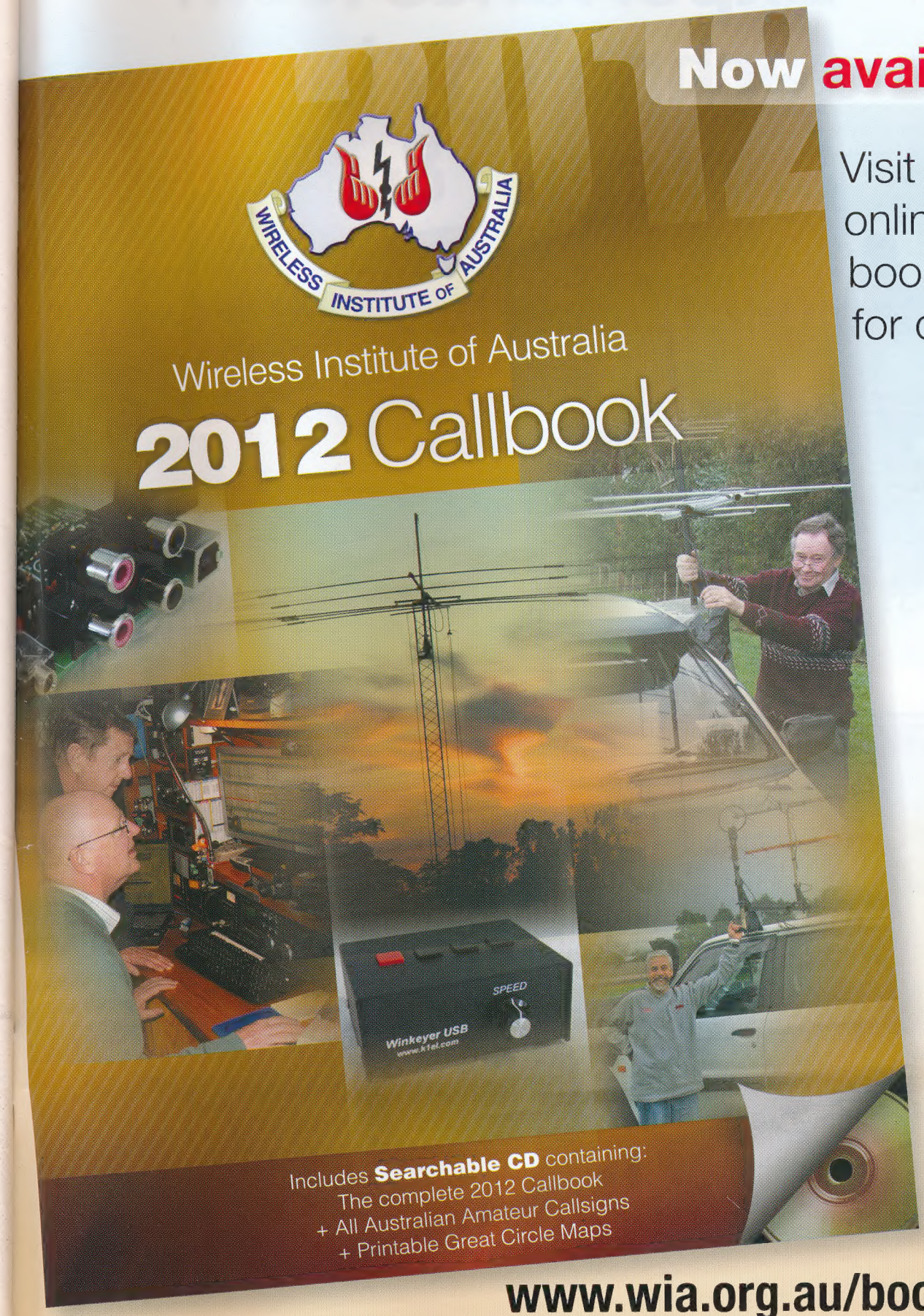
Bob Cooley KF6VSE shown here in the 80 m event. Bob took gold in the M65 Category (competitors 65 years plus).

ADRF Competitors test out their 80 m receivers at the Model Event.

WIA **2012** Callbook

Now available

Visit our online bookshop for details.



www.wia.org.au/bookshop

Experience Icom technology in analogue & digital

ID-31

IC-2820H

IC-RX7

IC-7700

IC-9100

IC-80AD

IC-92AD

ICOM

ICOM 573

To find out more about our latest products, call Icom on 03 9549 7500 or visit www.icom.net.au

Volume 79 Number 11 NOVEMBER 2011 Print Post Approved PP349181/0042